OPEN SOURCE LEARNING PLATFORM

Project report submitted in partial fulfillment of the requirement for the degree of Bachelor of Technology

in

Computer Science and Engineering/Information Technology

By

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to

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Candidate's Declaration

I hereby declare that the work presented in this report entitled **" Open source learning platform"** is in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology** in **Computer Science and Engineering/Information Technology** submitted in the

Department of Computer Science & Engineering and Information Technology**,** Jaypee University of Information Technology Waknaghat is an authentic record of my own work carried out over a period from August 2021 to December 2021 under the supervision of **Dr. Rajini Mohana, associate Professor, CSE**.

The matter embodied in the report has not been submitted for the award of any other degree or diploma.

(Student Signature)   (Student Signature)
Suryansh Saraswat (181397)   Deepak Kumar (181337)

This is to certify that the above statement made by the candidate is true to the best of my knowledge.

(Supervisor Signature)
Dr. Rajini Mohana
Associate Professor
Computer Science and Technology
8th May 2022

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Abstract

The efforts required in achieving the desired output can be effectively and economically decreased by the implementation of open source. Open source is a way that reduces the cost of hiring people and gives a wider approach to the product. E-learning platform is made open source due to the fact that students who learn can also implement and get hands-on experience. The advantage of this is that students don't have to go anywhere else to get hands-on experience of what they are learning on our website.

Making our project open source plays an important role in what we are aiming to achieve with this project and it also helps in reducing the huge amount of workload of thinking about new innovative ideas every time since others can also put in their ideas.

The significance of this project is to provide user-friendly support for the students in order to help them study easily, and accessible. The project will also help those who are trying to experience real-world work in their respective fields but do not want to straightforward jump into the corporate world.

Acknowledgment

I am overwhelmed in all humbleness and gratefulness to acknowledge my depth to all those who have helped me to put these ideas, well above the level of simplicity and into something concrete.

I would like to express my special thanks to my teacher as well as our Head of Department who gave me the golden opportunity to do this wonderful project on the topic of Open Source E-learning platform, which also helped me in doing a lot of research and I came to know about so many new things. I am really thankful to them.

Any attempt at any level can't be satisfactorily completed without the support and guidance of MY parents and friends.

I would like to thank my parents who helped me a lot in gathering different information, collecting data, and guiding me from time to time in making this project. Despite their busy schedules, they gave me different ideas in making this project unique.

Introduction

Open source is the new way of creating an application website or software under a licensed team but making its source code available to everyone on the internet to contribute to it.

The license holders of this application or software allow the people to modify or add some features or fix bugs in their software and this is the reason why open source is the most developed type of software in the market today.

The benefits of open source are many but we would like to highlight a few of them namely, the free to code real-world projects, the number of new skills and learning one can take away, and the best part is we don't have to work on the whole project, we can always pick snippets our on the project and work on them.

Open Source learning platform is one of the many open source applications present out there. We have tried to create a community of people inclusive of students, mentors, and many others who go to the internet every day to learn but can't find good material due to different problems. Details about the hows and whys of the project are listed and written down below.

Problem Statement

When we sat down to discuss what problem statement we should pick, we had a few parameters in our mind which included ease of access, betterment of our creed: the students, and help to the outer world.

So we came across a minimal problem that creates a hassle in almost every student's life and that is the availability of really good material on new tech topics across the World Wide Web.

We thought about making an open-source e-learning environment where students of every fashion can come and **Learn, create & educate** their fellow friends or colleagues or anybody sitting across the world.

So we created an Open source E-learning Platform where we tried to achieve a solution for this problem of our fellow students and tried to give them access to a world full of genuine good study material for them to follow and create, innovate.

We tried to make it more user-friendly initially so that anyone who wants to contribute to it can easily do so and can understand what we are trying to achieve through this idea.

Objectives

Our objectives were:

➔ Making our project easily accessible to both the classes, that is the coders who want to work on it, and make it better as well as the learners who want to gain knowledge and then implement it.

➔ Making sure we keep everything superficially visible, every element should be as simple as possible but still keep the elegant vibe to it.

➔ Making sure we get hold of the best material out there, so as to provide learner satisfaction.

Methodology

The word "open source" initially related to open source software (OSS). Anyone can examine, alter, and share open source software, which is code that is supposed to be publicly accessible.

Peer review and community production are used to build open source software in a decentralized and collaborative manner. Because open source software is produced by communities rather than a single author or organization, it is frequently less expensive, more flexible, and has a longer lifespan than proprietary software.

Open source has evolved into a movement and a way of life that extends beyond software development. The open source movement uses open source software's values and decentralized production style to develop fresh solutions to challenges in their communities and industries.

The process through which an open source community project develops open source software is referred to as an open source development model. After that, the software is distributed under an open source license, allowing anybody to look at and edit the source code.

On GitHub, you may browse repositories and participate in community projects for many open source projects. Popular open source projects include Linux®, Ansible, and Kubernetes.

Chapter 1.5: Organisation of chapters

The report consists of the following chapters:

1. Chapter 1 - Introduction
2. Chapter 2 - Literature Review
3. Chapter 3 - System Development
4. Chapter 4 - Performance Analysis
5. Chapter 5 - Conclusions

Literature Review

1.1 Literature Review based on other E-learning Websites

During our pre-planning phase we went through a number of websites that are offering courses on different technology topics and have summarized a few points from each website given below:

1. Coursera: We researched this website because this website was also a reason why we wanted to make this project. Websites like Coursera offer high prices for courses which can be easily found on youtube or GitHub but the main point is that Coursera also offers financial aid which takes up to 15-30 days for the application to be processed and sanctioned. The time limit that they take to allow us to study through their course is enough for a student to be behind their peers because learning in colleges is a fast process you may need to learn some language in just 3 days and if you apply here in Coursera it would take you 18-33 days to learn that language given the fact that they take 15-30 days to process the application if we take up a paid course through financial aid.

2. Udemy: Udemy was also like Coursera, but the major difference was the availability of a wide range of courses on udemy which were limited to coursera. Prices of Udemy were higher than even coursera and they didn't even offer any financial aid feature, which makes it next to impossible for students in college to learn something or access their good courses because no student is financially able to buy these courses.

3. UpGrad: This was particularly new in business and was recently launched but still had a wide variety of topics covered through their courses, the one feature that they had better was that UpGrad offered courses in a more hands-on mode, like you will learn stuff through doing projects and experiments.

On the basis of the following website's features, we deduced the following points:

- We need to create an easily accessible project
- We need to make it user friendly and simple for every person from every realm to understand its working
- We need to keep it open source for people to learn and then try it hands-on through the open-source feature of our project

System Development

3.1 **Languages and environments to be used**

To make it easy for people to work upon and understand we kept the website frontend limited to HTML, CSS, BOOTSTRAP, and JAVASCRIPT.

We used PHP, MYSQL, and NODE JS in the backend and server side development.

We have also called an API particularly made for youtube to fetch playlists and their thumbnails from Youtube

Table 1

FRONTEND	
HTML	For basic layout and functions
CSS	For styling and features
JAVASCRIPT	For dynamic styling and features

Table 2

BACKEND	
PHP	For forms and pages that require data collection
MYSQL	For databases and feeding information

Table 3

SERVER SIDE DEVELOPMENT	
NODE JS	For server side works and API calling

3.1.1 **Hyper Text Markup Language**

HTML is the standard markup language for Web pages. We mostly use HTML for almost everything related to website development. HTML5, with its arrangement of principles and API, is being utilised to present the absolute most recent patterns in the site creation business. Like polyfill libraries, which are upheld by old programs similarly well. Program like Google Chrome is the ideal decision with regards to executing a HTML5 most recent arrangement of principles and APIs. A JavaScript library is accessible called Modernizr, which can recognize highlights that let the engineer progressively load polyfill libraries as required.

At the rudimentary level in uses of HTML, inquiries can be set to use the pictures, which are responsive in nature. With the srcset property of img component in HTML and joining it with picture components, a designer can completely control how the client will deliver a picture. Presently various kinds of a picture with size variety can be stacked by utilising the img component. Rules can be effortlessly set with the image component; we can proclaim the img component with the default source, and afterward for each case, a source can be given.

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <meta name="description" content="Responsive Bootstrap4 Shop Template, Created by Imran Hossain from https://imransdesign.com/">

    <!-- title -->
    <title>Open Source Library</title>

    <!-- favicon -->
    <link rel="shortcut icon" type="image/png" href="assets/img/favicon.png">
    <!-- google font -->
    <link href="https://fonts.googleapis.com/css?family=Open+Sans:300,400,700" rel="stylesheet">
    <link href="https://fonts.googleapis.com/css?family=Poppins:400,700&display=swap" rel="stylesheet">
    <!-- fontawesome -->
    <link rel="stylesheet" href="assets/css/all.min.css">
    <!-- bootstrap -->
    <link rel="stylesheet" href="assets/bootstrap/css/bootstrap.min.css">
    <!-- owl carousel -->
    <link rel="stylesheet" href="assets/css/owl.carousel.css">
    <!-- magnific popup -->
    <link rel="stylesheet" href="assets/css/magnific-popup.css">
    <!-- animate css -->
    <link rel="stylesheet" href="assets/css/animate.css">
    <!-- mean menu css -->
    <link rel="stylesheet" href="assets/css/meanmenu.min.css">
    <!-- main style -->
    <link rel="stylesheet" href="assets/css/main.css">
    <!-- responsive -->
    <link rel="stylesheet" href="assets/css/responsive.css">
```

```html
<!-- menu start -->
<nav class="main-menu">
    <ul>
        <li class="current-list-item"><a href="indext.html">Home</a></li>
        <li><a href="about.html">About</a></li>
        <li><a href="#">Topics</a>
            <ul class="sub-menu">
                <li><a href="artificialintelligence.html">Artificial Intelligence</a></li>
                <li><a href="machinelearning.html">Machine Learning</a></li>
                <li><a href="datasceince.html">Data science</a></li>
                <li><a href="deeplearning.html">Deep Learning</a></li>
                <li><a href="python.html">Python</a></li>
                <li><a href="java.html">JAVA</a></li>
                <li><a href="c.html">C and C++</a></li>
            </ul>
        </li>
        <li><a href="news.html">Daily technical News</a>
            <ul class="sub-menu">
                <li><a href="news.html">News</a></li>
                <li><a href="single-news.html">Single News</a></li>
            </ul>
        </li>
        <li><a href="contact.html">Contact Us</a></li>
        <li><a href="shop.html">Premium</a>
            <ul class="sub-menu">
                <li><a href="shop.html">Shop</a></li>
                <li><a href="checkout.html">Check Out</a></li>
                <li><a href="single-product.html">Single Product</a></li>
                <li><a href="cart.html">Cart</a></li>
            </ul>
        </li>
        <li>
            <div class="header-icons">
                <a class="shopping-cart" href="cart.html"><i class="fas fa-shopping-cart"></i></a>
                <a class="mobile-hide search-bar-icon" href="#"><i class="fas fa-search"></i></a>
            </div>
        </li>
    </ul>
</nav>
```

3.1.2 : Cascading Style Sheets

Cascading Style Sheets (CSS) is a template language utilized for depicting the introduction of a record written in a markup language, for example, HTML. CSS is a foundation innovation of the World Wide Web, close to HTML and JavaScript.

CSS is intended to empower the partition of show and content, including design, colours, and fonts. This detachment can work on content openness; give greater adaptability and control in the determination of show attributes; empower various website pages to share organising by indicating the significant CSS in a different .css record, which diminishes intricacy and redundancy in the primary substance; and empower the .css document to be stored to further develop the page load speed between the pages that share the document and its arranging.

CSS helps Web designers make a uniform look across a few pages of a Web website. Rather than characterising the style of each table and each square of text inside a

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page's HTML, generally utilised styles should be characterised just a single time in a CSS record. When the style is characterised in a falling template, it very well may be utilised by any page that references the CSS document. Also, CSS makes it simple to change styles across a few pages immediately. For instance, a Web designer might need to expand the default text size from 10pt to 12pt for fifty pages of a Web webpage. In the event that the pages all reference a similar template, the text size just should be changed on the template and every one of the pages will show the bigger text.

While CSS is incredible for making text styles, it is useful for organising different parts of Web page design too. For instance, CSS can be utilised to characterise the

cell cushioning of table cells, the style, thickness, and shade of a table's boundary, and the cushioning around pictures or different articles. CSS gives Web engineers more precise command over how Web pages will look than HTML does. This is the reason most Web pages today fuse falling templates.

```css
13   ------------------------------------------------------- */
14   html {
15     font-size: 14px;
16     font-weight: 400;
17     line-height: 28px;
18     height: 100%;
19   }
20
21   body {
22     font-family: "Open Sans", sans-serif;
23     font-weight: 400;
24     font-size: 1rem;
25     letter-spacing: 0.1px;
26     line-height: 1.8;
27     color: #051922;
28     overflow-x: hidden;
29   }
30
31   body img {
32     max-width: 100%;
33   }
34
35   a {
36     cursor: pointer;
37     text-decoration: none;
38     -webkit-transition: all 0.2s ease-in-out;
39     -o-transition: all 0.2s ease-in-out;
40     transition: all 0.2s ease-in-out;
41   }
42
43   a:hover {
44     color: #F28123;
45     text-decoration: none;
46   }
47
48   h1, .h1,
49   h2, .h2,
50   h3, .h3,
51   h4, .h4,
52   h5, .h5.
```

```css
@media only screen and (max-width: 575.96px) {
  h2, .h2 {
    font-size: 2rem;
    line-height: 2.25rem;
  }
}

h3, .h3 {
  font-size: 2rem;
  font-weight: 700;
  line-height: 2.25rem;
}

@media only screen and (max-width: 575.96px) {
  h3, .h3 {
    font-size: 1.75rem;
    line-height: 2rem;
  }
}
```

Bootstrap is an incredible tool stash - an assortment of HTML, CSS, and JavaScript devices for making and building site pages and web applications. It is a free and open source project, facilitated on GitHub, and initially made by (and for) Twitter.

```css
article, aside, figcaption, figure, footer, header, hgroup, main, nav, section {
  display: block;
}

body {
  margin: 0;
  font-family: -apple-system, BlinkMacSystemFont, "Segoe UI", Roboto, "Helvetica Neue", Arial, "Noto Sans", sans-serif,
  font-size: 1rem;
  font-weight: 400;
  line-height: 1.5;
  color: #212529;
```

```css
abbr[title],
abbr[data-original-title] {
  text-decoration: underline;
  -webkit-text-decoration: underline dotted;
  text-decoration: underline dotted;
  cursor: help;
  border-bottom: 0;
  -webkit-text-decoration-skip-ink: none;
  text-decoration-skip-ink: none;
}

address {
  margin-bottom: 1rem;
  font-style: normal;
  line-height: inherit;
}

ol,
ul,
dl {
  margin-top: 0;
  margin-bottom: 1rem;
}
```

substance refreshes, intuitive guides, energised 2D/3D illustrations, looking over video jukeboxes, and so forth — you can wager that JavaScript is likely involved. It is the third layer of the layer cake of standard web innovations, two of which (HTML and CSS) we have shrouded in considerably more detail in different pieces of the Learning Area.

JavaScript is a scripting language that empowers you to make progressively refreshing substance, control sight and sound, enliven pictures, and essentially all the other things. (OK, not everything, except it is astounding what you can accomplish with a couple of lines of JavaScript code.)

```
// homepage slider
$(".homepage-slider").owlCarousel({
    items: 1,
    loop: true,
    autoplay: true,
    nav: true,
    dots: false,
    navText: ['<i class="fas fa-angle-left"></i>', '<i class="fas fa-angle-right"></i>'],
    responsive:{
        0:{
            items:1,
            nav:false,
            loop:true
        },
        600:{
            items:1,
            nav:true,
            loop:true
        },
        1000:{
            items:1,
            nav:true,
            loop:true
        }
    }
});
```

```
// count down
if($('.time-countdown').length){
    $('.time-countdown').each(function() {
    var $this = $(this), finalDate = $(this).data('countdown');
    $this.countdown(finalDate, function(event) {
        var $this = $(this).html(event.strftime('' + '<div class="counter-column">
    });
});
}

// projects filters isotop
$(".product-filters li").on('click', function () {

    $(".product-filters li").removeClass("active");
    $(this).addClass("active");

    var selector = $(this).attr('data-filter');

    $(".product-lists").isotope({
        filter: selector,
    });

});
```

3.1.4 Hypertext Preprocessor(PHP)

PHP (Hypertext Preprocessor) is known as a universally useful prearranging language that can be utilized to foster dynamic and intuitive sites. It was among the main server-side dialects that could be installed into HTML, making it simpler to add usefulness to website pages without expecting to call outer records for

information. Its utilization has advanced throughout the long term, with standard redesignsadding highlights and opening new abilities.

```php
<?php
    if( empty( $_POST['token'] ) ){
        echo '<span class="notice">Error!</span>';
        exit;
    }
    if( $_POST['token'] != 'FsWga4&@f6aw' ){
        echo '<span class="notice">Error!</span>';
        exit;
    }

    $name = $_POST['name'];
    $from = $_POST['email'];
    $phone = $_POST['phone'];
    $subject = stripslashes( nl2br( $_POST['subject'] ) );
    $message = stripslashes( nl2br( $_POST['message'] ) );

    $headers ="From: Form Contact <$from>\n";
    $headers.="MIME-Version: 1.0\n";
    $headers.="Content-type: text/html; charset=iso 8859-1";
```

```php
ob_start();
?>
    Hi imransdesign!<br /><br />
    <?php echo ucfirst( $name ); ?>  has sent you a message via contact form on your website!
    <br /><br />

    Name: <?php echo ucfirst( $name ); ?><br />
    Email: <?php echo $from; ?><br />
    Phone: <?php echo $phone; ?><br />
    Subject: <?php echo $subject; ?><br />
    Message: <br /><br />
    <?php echo $message; ?>
    <br />
    <br />
    =========================================================
<?php
$body = ob_get_contents();
ob_end_clean();
```

3.1.5 NODE JS

Node.js is a stage based on Chrome's JavaScript runtime for effectively fabricating quick and adaptable organisation applications. Node.js utilises an occasion driven, non-impeding I/O model that makes it lightweight and proficient, ideal for information concentrated continuous applications that stumble into circulated gadgets.

Analysis and Result

Flow Diagram:
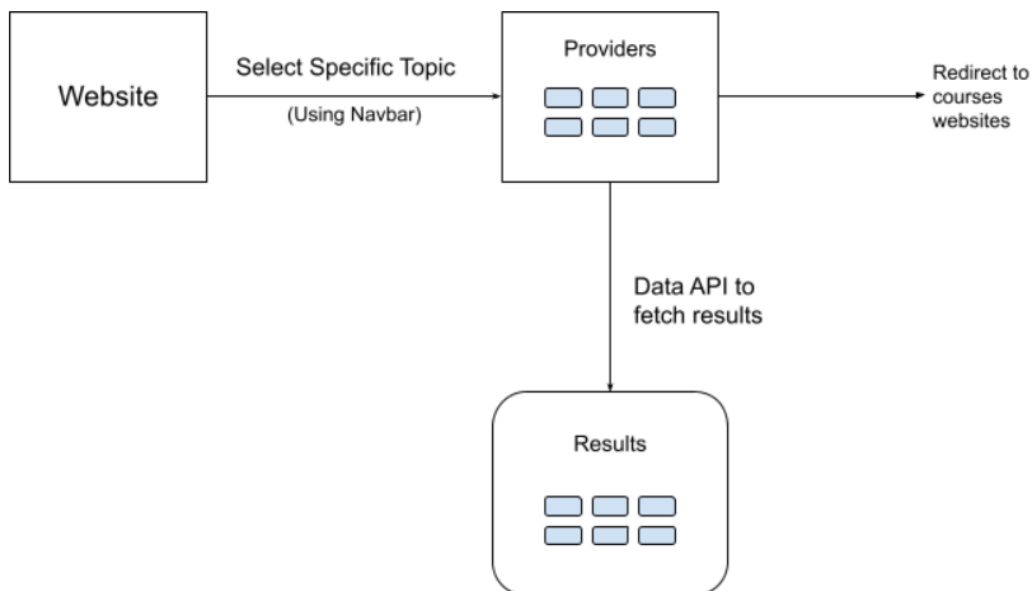
1. We used HTML/CSS/Javascript to create the platform

In Homepage, Navbar helps to navigate to specific pages, Carousel shows top-rated topics and it redirects directly to the specific topics
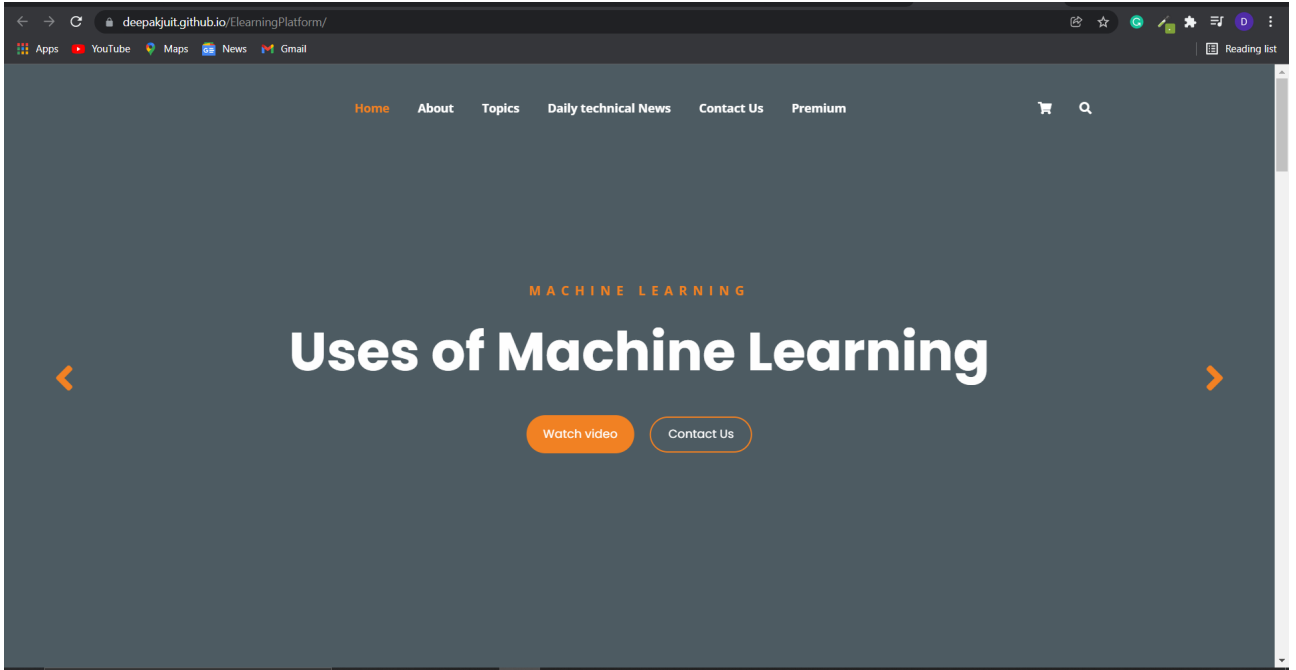
2. Using Navbar, users can select the topics they want to such as AI, Machine Learning, Data Science and more
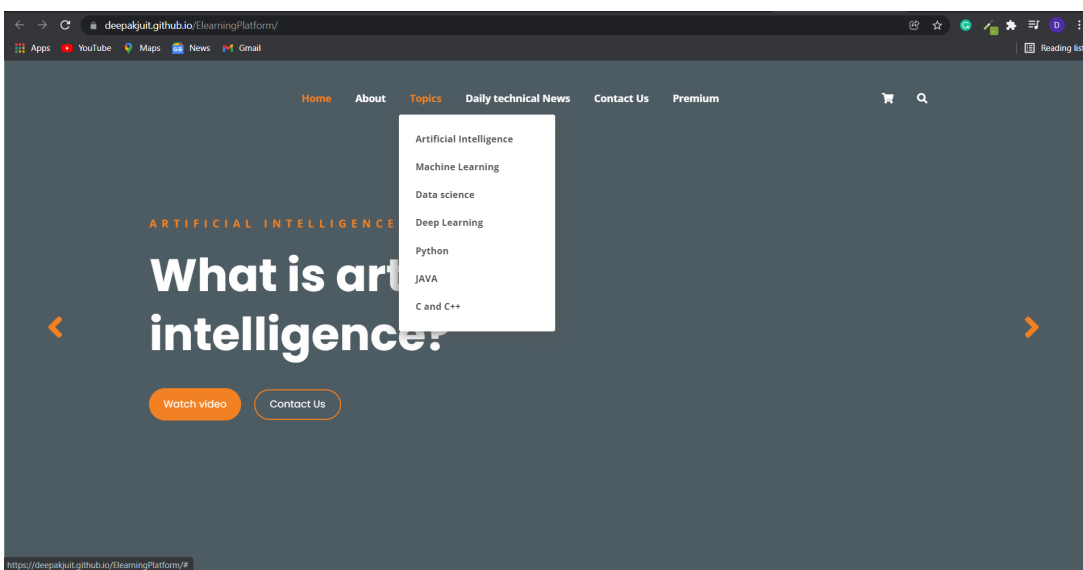
3. After selecting a topic, the website redirects to the topic, and user can select free and paid courses as per the preferences
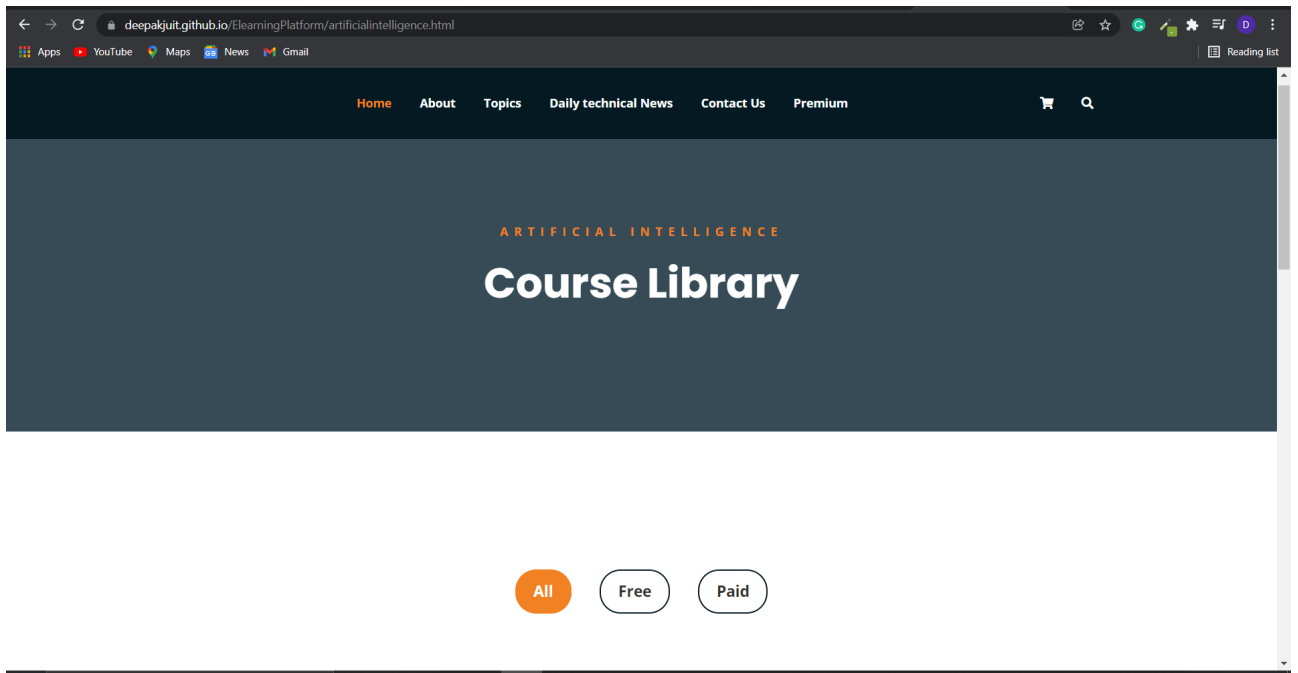
After selecting the free or paid, the user gets all the courses in the grid and select what they prefer
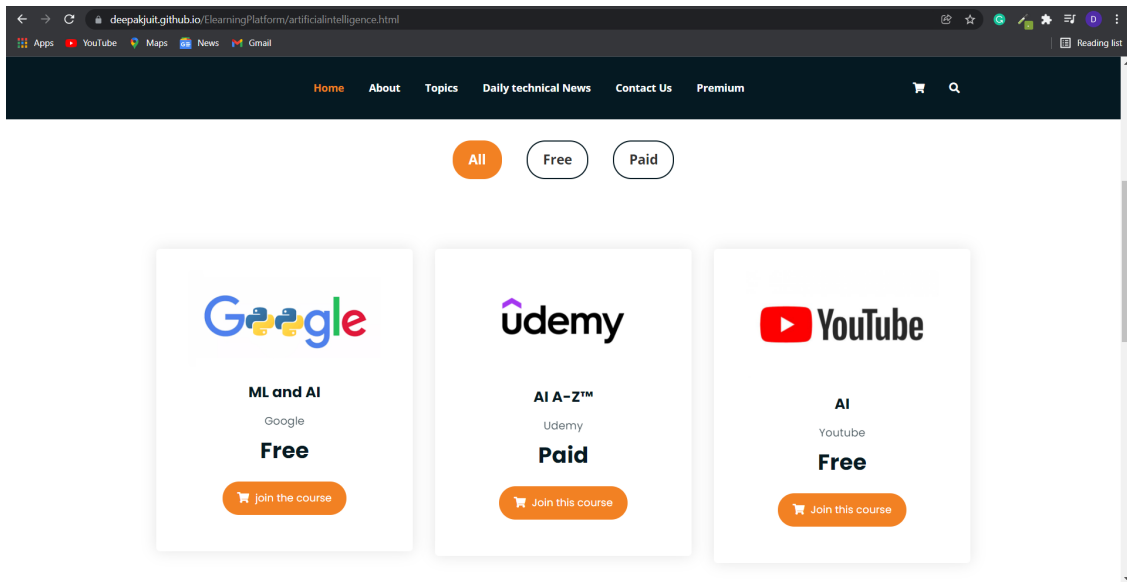
4. We integrated Youtube Data API v3 in the website, and show the top 10 most viewed videos for the each topics selected by users

5. We created a news section for visitors to read about new inventions and happenings in the world of computer science
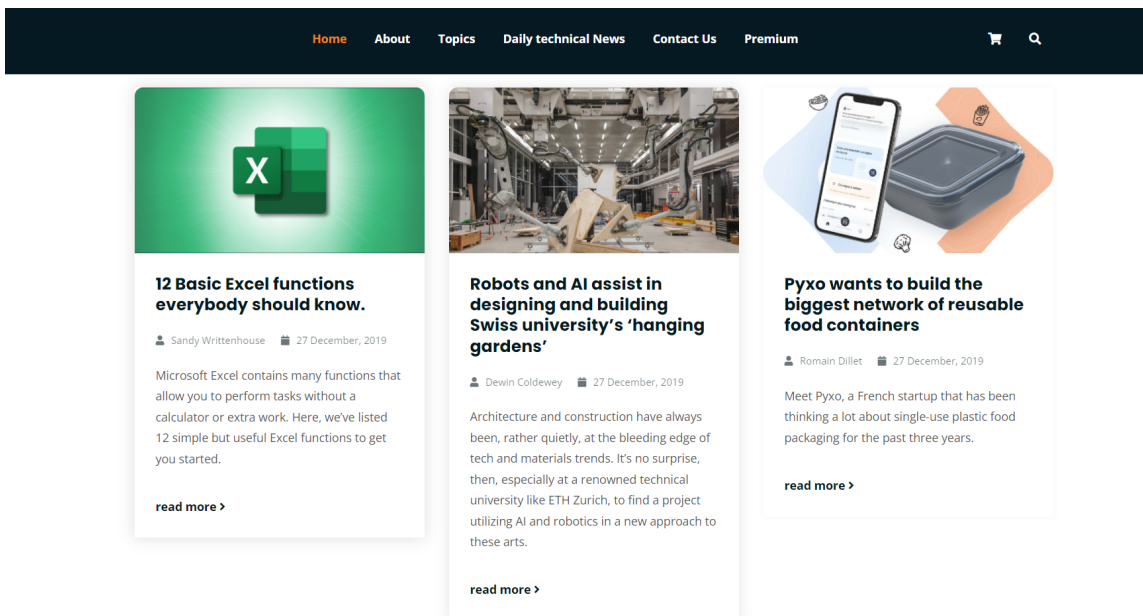
6. We have also created a contact us page if any open source contributor wants to connect with us with some issue or suggestions of any sort

7. Created a database for our website which is trained to provide instant suggestions using the ratings provided to the course.

    a. Coursera

        Link to the data set:
        https://www.kaggle.com/khusheekapoor/coursera-courses-dataset-2021

    b. Udacity

        Link to the Data set:
        https://www.kaggle.com/khusheekapoor/udacity-courses-dataset-2021

    c. EdX courses

        Link to the Data set:
        https://www.kaggle.com/khusheekapoor/edx-courses-dataset-2021

Code Snippets

1. Index.HTML

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <meta name="description" content="Responsive Bootstrap4 Shop Template, Created by Imran Hossain from https://imransdesign.com/">

    <!-- title -->
    <title>Open Source Library</title>

    <!-- favicon -->
    <link rel="shortcut icon" type="image/png" href="assets/img/favicon.png">
    <!-- google font -->
    <link href="https://fonts.googleapis.com/css?family=Open+Sans:300,400,700" rel="stylesheet">
    <link href="https://fonts.googleapis.com/css?family=Poppins:400,700&display=swap" rel="stylesheet">
    <!-- fontawesome -->
    <link rel="stylesheet" href="assets/css/all.min.css">
    <!-- bootstrap -->
    <link rel="stylesheet" href="assets/bootstrap/css/bootstrap.min.css">
    <!-- owl carousel -->
    <link rel="stylesheet" href="assets/css/owl.carousel.css">
    <!-- magnific popup -->
    <link rel="stylesheet" href="assets/css/magnific-popup.css">
    <!-- animate css -->
    <link rel="stylesheet" href="assets/css/animate.css">
    <!-- mean menu css -->
    <link rel="stylesheet" href="assets/css/meanmenu.min.css">
    <!-- main style -->
    <link rel="stylesheet" href="assets/css/main.css">
    <!-- responsive -->
    <link rel="stylesheet" href="assets/css/responsive.css">

</head>
<body>
```


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2. **NEWS.HTML**

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width,
initial-scale=1">
    <meta name="description" content="Responsive Bootstrap4 Shop
Template, Created by Imran Hossain from https://imransdesign.com/">

    <!-- title -->
    <title>News</title>

    <!-- favicon -->
    <link rel="shortcut icon" type="image/png"
href="assets/img/favicon.png">
    <!-- google font -->
    <link
href="https://fonts.googleapis.com/css?family=Open+Sans:300,400,700"
rel="stylesheet">
    <link
href="https://fonts.googleapis.com/css?family=Poppins:400,700&displa
y=swap" rel="stylesheet">
    <!-- fontawesome -->
    <link rel="stylesheet" href="assets/css/all.min.css">
    <!-- bootstrap -->
    <link rel="stylesheet"
href="assets/bootstrap/css/bootstrap.min.css">
    <!-- owl carousel -->
    <link rel="stylesheet" href="assets/css/owl.carousel.css">
```

```html
    <!-- magnific popup -->
    <link rel="stylesheet" href="assets/css/magnific-popup.css">
    <!-- animate css -->
    <link rel="stylesheet" href="assets/css/animate.css">
    <!-- mean menu css -->
    <link rel="stylesheet" href="assets/css/meanmenu.min.css">
    <!-- main style -->
    <link rel="stylesheet" href="assets/css/main.css">
    <!-- responsive -->
    <link rel="stylesheet" href="assets/css/responsive.css">

</head>
<body>


    <!--PreLoader-->
    <div class="loader">
        <div class="loader-inner">
            <div class="circle"></div>


        </div>
    </div>
    <!--PreLoader Ends-->


    <!-- header -->
    <div class="top-header-area" id="sticker">
        <div class="container">
            <div class="row">
                <div class="col-lg-12 col-sm-12 text-center">
                    <div class="main-menu-wrap">
                        <!-- logo -->
                        <div class="site-logo">
                            <a href="index.html">
                                <img src="assets/img/logo.png"
alt="">
                            </a>
                        </div>
                        <!-- logo -->

                        <!-- menu start -->
                        <nav class="main-menu">
                            <ul>
                                <li class="current-list-item"><a
href="indext.html">Home</a></li>
                                <li><a
href="about.html">About</a></li>
                                <li><a href="#">Topics</a>
                                    <ul class="sub-menu">
                                        <li><a
href="artificialintelligence.html">Artificial Intelligence</a></li>
```
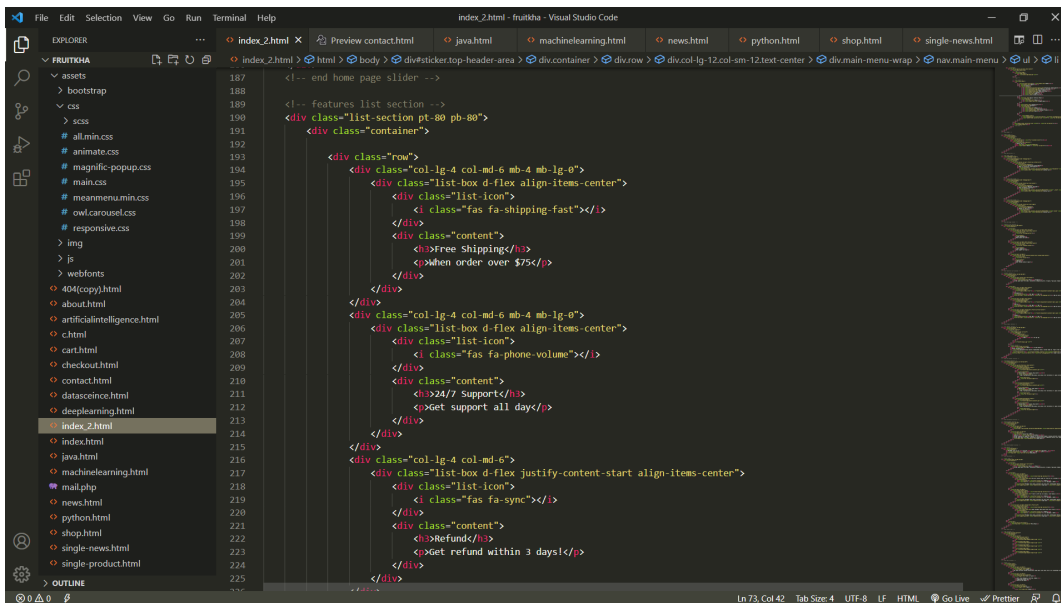
```html
                                        <li><a
href="machinelearning.html">Machine Learning</a></li>
                                        <li><a
href="datasceince.html">Data science</a></li>
                                        <li><a
href="deeplearning.html">Deep Learning</a></li>
                                        <li><a
href="python.html">Python</a></li>
                                        <li><a
href="java.html">JAVA</a></li>
                                        <li><a href="c.html">C and
C++</a></li>
                                    </ul>
                                </li>
                                <li><a href="news.html">Daily
technical News</a>
                                    <ul class="sub-menu">
                                        <li><a
href="news.html">News</a></li>
                                        <li><a
href="single-news.html">Single News</a></li>
                                    </ul>
                                </li>
                                <li><a href="contact.html">Contact
Us</a></li>
                                <li><a href="shop.html">Premium</a>
                                    <ul class="sub-menu">
                                        <li><a
href="shop.html">Shop</a></li>
                                        <li><a
href="checkout.html">Check Out</a></li>
                                        <li><a
href="single-product.html">Single Product</a></li>
                                        <li><a
href="cart.html">Cart</a></li>
                                    </ul>
                                </li>
                                <li>
                                    <div class="header-icons">
                                        <a class="shopping-cart"
href="cart.html"><i class="fas fa-shopping-cart"></i></a>
                                        <a class="mobile-hide
search-bar-icon" href="#"><i class="fas fa-search"></i></a>
                                    </div>
                                </li>
                            </ul>
                        </nav>
                        <a class="mobile-show search-bar-icon"
href="#"><i class="fas fa-search"></i></a>
```

```html
                    <div class="mobile-menu"></div>
                    <!-- menu end -->
                </div>
            </div>
        </div>
    </div>
    <!-- end header -->


    <!-- search area -->
    <div class="search-area">
        <div class="container">
            <div class="row">
                <div class="col-lg-12">
                    <span class="close-btn"><i class="fas
fa-window-close"></i></span>
                    <div class="search-bar">
                        <div class="search-bar-tablecell">
                            <h3>Search For:</h3>
                            <input type="text"
placeholder="Keywords">
                            <button type="submit">Search <i
class="fas fa-search"></i></button>
                        </div>
                    </div>
                </div>
            </div>
        </div>
    </div>
    <!-- end search arewa -->


    <!-- breadcrumb-section -->
    <div class="breadcrumb-section breadcrumb-bg">
        <div class="container">
            <div class="row">
                <div class="col-lg-8 offset-lg-2 text-center">
                    <div class="breadcrumb-text">
                        <p>Organic Information</p>
                        <h1>News Article</h1>
                    </div>
                </div>
            </div>
        </div>
    </div>
    <!-- end breadcrumb section -->


    <!-- latest news -->
    <div class="latest-news mt-150 mb-150">
        <div class="container">
```

```html
<div class="row">
    <div class="col-lg-4 col-md-6">
        <div class="single-latest-news">
            <a href="single-news.html"><div
class="latest-news-bg news-bg-1"></div></a>
            <div class="news-text-box">
                <h3><a href="single-news.html">12 Basic
Excel functions everybody should know.</a></h3>
                <p class="blog-meta">
                    <span class="author"><i class="fas
fa-user"></i> Sandy Writtenhouse</span>
                    <span class="date"><i class="fas
fa-calendar"></i> 27 December, 2019</span>
                </p>
                <p class="excerpt">Microsoft Excel
contains many functions that allow you to perform tasks without a
calculator or extra work. Here, we've listed 12 simple but useful
Excel functions to get you started.</p>
                <a
href="https://www.howtogeek.com/765624/basic-excel-functions-everybo
dy-should-know/" target="_blank"class="read-more-btn">read more <i
class="fas fa-angle-right"></i></a>
            </div>
        </div>
    </div>
    <div class="col-lg-4 col-md-6">
        <div class="single-latest-news">
            <a href="single-news.html"><div
class="latest-news-bg news-bg-2"></div></a>
            <div class="news-text-box">
                <h3><a href="single-news.html">Robots
and AI assist in designing and building Swiss university's 'hanging
gardens'</a></h3>
                <p class="blog-meta">
                    <span class="author"><i class="fas
fa-user"></i> Dewin Coldewey</span>
                    <span class="date"><i class="fas
fa-calendar"></i> 27 December, 2019</span>
                </p>
                <p class="excerpt">Architecture and
construction have always been, rather quietly, at the bleeding edge
of tech and materials trends. It's no surprise, then, especially at
a renowned technical university like ETH Zurich, to find a project
utilizing AI and robotics in a new approach to these arts.</p>
                <a
href="https://techcrunch.com/2021/11/24/robots-and-ai-assist-in-desi
gning-and-building-swiss-universitys-hanging-gardens/"
target="_blank" class="read-more-btn">read more <i class="fas
fa-angle-right"></i></a>
```

```html
                    </div>
                </div>
            </div>
            <div class="col-lg-4 col-md-6">
                <div class="single-latest-news">
                    <a href="single-news.html"><div
class="latest-news-bg news-bg-3"></div></a>
                    <div class="news-text-box">
                        <h3><a href="single-news.html">Pyxo
wants to build the biggest network of reusable food
containers</a></h3>
                        <p class="blog-meta">
                            <span class="author"><i class="fas
fa-user"></i> Romain Dillet</span>
                            <span class="date"><i class="fas
fa-calendar"></i> 27 December, 2019</span>
                        </p>
                        <p class="excerpt">Meet Pyxo, a French
startup that has been thinking a lot about single-use plastic food
packaging for the past three years.</p>
                        <a
href="https://techcrunch.com/2021/11/25/pyxo-wants-to-build-the-bigg
est-network-of-reusable-food-containers/" target="_blank"
class="read-more-btn">read more <i class="fas
fa-angle-right"></i></a>
                    </div>
                </div>
            </div>
            <div class="col-lg-4 col-md-6">
                <div class="single-latest-news">
                    <a href="single-news.html"><div
class="latest-news-bg news-bg-4"></div></a>
                    <div class="news-text-box">
                        <h3><a href="single-news.html">How to
Override a List Attribute's Append() Method in Python</a></h3>
                        <p class="blog-meta">
                            <span class="author"><i class="fas
fa-user"></i> Mike</span>
                            <span class="date"><i class="fas
fa-calendar"></i> 27 December, 2019</span>
                        </p>
                        <p class="excerpt">I had a use-case
where I needed to create a class that had an attribute that was a
Python list. Seems simple, right? The part that made it complicated
is that I needed to do something special when anything was appended
to that attribute.    </p>
                        <a
href="https://www.blog.pythonlibrary.org/2021/11/10/how-to-add-list-
attribute-append-updates-to-a-class-in-python/" target="_blank"
```

```html
class="read-more-btn">read more <i class="fas
fa-angle-right"></i></a>
                            </div>
                        </div>
                    </div>
                    <div class="col-lg-4 col-md-6">
                        <div class="single-latest-news">
                            <a href="single-news.html"><div
class="latest-news-bg news-bg-5"></div></a>
                            <div class="news-text-box">
                                <h3><a href="single-news.html">Why the
berries always look delecious</a></h3>
                                <p class="blog-meta">
                                    <span class="author"><i class="fas
fa-user"></i> Admin</span>
                                    <span class="date"><i class="fas
fa-calendar"></i> 27 December, 2019</span>
                                </p>
                                <p class="excerpt">Lorem ipsum dolor sit
amet, consectetur adipisicing elit. Voluptatibus laborum autem,
dolores inventore, beatae nam.</p>
                                <a href="single-news.html"
class="read-more-btn">read more <i class="fas
fa-angle-right"></i></a>
                            </div>
                        </div>
                    </div>
                    <div class="col-lg-4 col-md-6">
                        <div class="single-latest-news">
                            <a href="single-news.html"><div
class="latest-news-bg news-bg-6"></div></a>
                            <div class="news-text-box">
                                <h3><a href="single-news.html">Love for
fruits are genuine of John Doe</a></h3>
                                <p class="blog-meta">
                                    <span class="author"><i class="fas
fa-user"></i> Admin</span>
                                    <span class="date"><i class="fas
fa-calendar"></i> 27 December, 2018</span>
                                </p>
                                <p class="excerpt">Lorem ipsum dolor sit
amet, consectetur adipisicing elit. Voluptatibus laborum autem,
dolores inventore, beatae nam.</p>
                                <a href="single-news.html"
class="read-more-btn">read more <i class="fas
fa-angle-right"></i></a>
                            </div>
                        </div>
                    </div>
```

```html
                    </div>

            <div class="row">
                <div class="container">
                    <div class="row">
                        <div class="col-lg-12 text-center">
                            <div class="pagination-wrap">
                                <ul>
                                    <li><a href="#">Prev</a></li>
                                    <li><a href="#">1</a></li>
                                    <li><a class="active"
href="#">2</a></li>
                                    <li><a href="#">3</a></li>
                                    <li><a href="#">Next</a></li>
                                </ul>
                            </div>
                        </div>
                    </div>
                </div>
            </div>
        </div>
    <!-- end latest news -->


    <!-- logo carousel -->
    <div class="logo-carousel-section">
        <div class="container">
            <div class="row">
                <div class="col-lg-12">
                    <div class="logo-carousel-inner">
                        <div class="single-logo-item">
                            <img
src="assets/img/company-logos/1.png" alt="">
                        </div>
                        <div class="single-logo-item">
                            <img
src="assets/img/company-logos/2.png" alt="">
                        </div>
                        <div class="single-logo-item">
                            <img
src="assets/img/company-logos/3.png" alt="">
                        </div>
                        <div class="single-logo-item">
                            <img
src="assets/img/company-logos/4.png" alt="">
                        </div>
                        <div class="single-logo-item">
                            <img
src="assets/img/company-logos/5.png" alt="">
```

```html
                        </div>
                    </div>
                </div>
            </div>
        </div>
    </div>
    <!-- end logo carousel -->


    <!-- footer -->
    <div class="footer-area">
        <div class="container">
            <div class="row">
                <div class="col-lg-3 col-md-6">
                    <div class="footer-box about-widget">
                        <h2 class="widget-title">About us</h2>
                        <p>Ut enim ad minim veniam perspiciatis unde
omnis iste natus error sit voluptatem accusantium doloremque
laudantium, totam rem aperiam, eaque ipsa quae.</p>
                    </div>
                </div>
                <div class="col-lg-3 col-md-6">
                    <div class="footer-box get-in-touch">
                        <h2 class="widget-title">Get in Touch</h2>
                        <ul>
                            <li>34/8, East Hukupara, Gifirtok,
Sadan.</li>
                            <li>support@fruitkha.com</li>
                            <li>+00 111 222 3333</li>
                        </ul>
                    </div>
                </div>
                <div class="col-lg-3 col-md-6">
                    <div class="footer-box pages">
                        <h2 class="widget-title">Pages</h2>
                        <ul>
                            <li><a href="index.html">Home</a></li>
                            <li><a href="about.html">About</a></li>
                            <li><a
href="services.html">Shop</a></li>
                            <li><a href="news.html">News</a></li>
                            <li><a
href="contact.html">Contact</a></li>
                        </ul>
                    </div>
                </div>
                <div class="col-lg-3 col-md-6">
                    <div class="footer-box subscribe">
                        <h2 class="widget-title">Subscribe</h2>
```

```html
                        <p>Subscribe to our mailing list to get the
latest updates.</p>
                        <form action="index.html">
                            <input type="email" placeholder="Email">
                            <button type="submit"><i class="fas
fa-paper-plane"></i></button>
                        </form>
                    </div>
                </div>
            </div>
        </div>
    </div>
    <!-- end footer -->


    <!-- copyright -->
    <div class="copyright">
        <div class="container">
            <div class="row">
                <div class="col-lg-6 col-md-12">

                </div>
                <div class="col-lg-6 text-right col-md-12">
                    <div class="social-icons">
                        <ul>
                            <li><a href="#" target="_blank"><i
class="fab fa-facebook-f"></i></a></li>
                            <li><a href="#" target="_blank"><i
class="fab fa-twitter"></i></a></li>
                            <li><a href="#" target="_blank"><i
class="fab fa-instagram"></i></a></li>
                            <li><a href="#" target="_blank"><i
class="fab fa-linkedin"></i></a></li>
                            <li><a href="#" target="_blank"><i
class="fab fa-dribbble"></i></a></li>
                        </ul>
                    </div>
                </div>
            </div>
        </div>
    </div>
    <!-- end copyright -->


    <!-- jquery -->
    <script src="assets/js/jquery-1.11.3.min.js"></script>
    <!-- bootstrap -->
    <script src="assets/bootstrap/js/bootstrap.min.js"></script>
    <!-- count down -->
    <script src="assets/js/jquery.countdown.js"></script>
    <!-- isotope -->
```

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```
            <script src="assets/js/jquery.isotope-3.0.6.min.js"></script>
            <!-- waypoints -->
            <script src="assets/js/waypoints.js"></script>
            <!-- owl carousel -->
            <script src="assets/js/owl.carousel.min.js"></script>
            <!-- magnific popup -->
            <script src="assets/js/jquery.magnific-popup.min.js"></script>
            <!-- mean menu -->
            <script src="assets/js/jquery.meanmenu.min.js"></script>
            <!-- sticker js -->
            <script src="assets/js/sticker.js"></script>
            <!-- main js -->
            <script src="assets/js/main.js"></script>


        </body>
        </html>
```

3. **Artificial Intelligence.html**

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <meta name="description" content="Responsive Bootstrap4 Shop Template,
Created by Imran Hossain from https://imransdesign.com/">

    <!-- title -->
    <title>Topics</title>


    <!-- favicon -->
    <link rel="shortcut icon" type="image/png"
href="assets/img/favicon.png">
    <!-- google font -->
    <link
href="https://fonts.googleapis.com/css?family=Open+Sans:300,400,700"
rel="stylesheet">
    <link
href="https://fonts.googleapis.com/css?family=Poppins:400,700&display=swap
" rel="stylesheet">
    <!-- fontawesome -->
    <link rel="stylesheet" href="assets/css/all.min.css">
    <!-- bootstrap -->
    <link rel="stylesheet" href="assets/bootstrap/css/bootstrap.min.css">
    <!-- owl carousel -->
    <link rel="stylesheet" href="assets/css/owl.carousel.css">
    <!-- magnific popup -->
```

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```html
        <link rel="stylesheet" href="assets/css/magnific-popup.css">
        <!-- animate css -->
        <link rel="stylesheet" href="assets/css/animate.css">
        <!-- mean menu css -->
        <link rel="stylesheet" href="assets/css/meanmenu.min.css">
        <!-- main style -->
        <link rel="stylesheet" href="assets/css/main.css">
        <!-- responsive -->
        <link rel="stylesheet" href="assets/css/responsive.css">

</head>
<body>

    <!--PreLoader-->
    <div class="loader">
        <div class="loader-inner">
            <div class="circle"></div>
        </div>
    </div>
    <!--PreLoader Ends-->


    <!-- header -->
    <div class="top-header-area" id="sticker">
        <div class="container">
            <div class="row">
                <div class="col-lg-12 col-sm-12 text-center">
                    <div class="main-menu-wrap">
                        <!-- logo -->
                        <div class="site-logo">
                            <a href="index.html">
                                <img src="assets/img/logo.png" alt="">
                            </a>
                        </div>
                        <!-- logo -->

                        <!-- menu start -->
                        <nav class="main-menu">
                            <ul>
                                <li class="current-list-item"><a
href="indext.html">Home</a></li>
                                <li><a href="about.html">About</a></li>
                                <li><a href="#">Topics</a>
                                    <ul class="sub-menu">
                                        <li><a
href="artificialintelligence.html">Artificial Intelligence</a></li>
                                        <li><a
href="machinelearning.html">Machine Learning</a></li>
                                        <li><a
href="datasceince.html">Data science</a></li>
```

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```html
                                        <li><a
href="deeplearning.html">Deep Learning</a></li>
                                        <li><a
href="python.html">Python</a></li>
                                        <li><a
href="java.html">JAVA</a></li>
                                        <li><a href="c.html">C and
C++</a></li>
                                    </ul>
                                </li>
                                <li><a href="news.html">Daily technical
News</a>
                                    <ul class="sub-menu">
                                        <li><a
href="news.html">News</a></li>
                                        <li><a
href="single-news.html">Single News</a></li>
                                    </ul>
                                </li>
                                <li><a href="contact.html">Contact
Us</a></li>
                                <li><a href="shop.html">Premium</a>
                                    <ul class="sub-menu">
                                        <li><a
href="shop.html">Shop</a></li>
                                        <li><a href="checkout.html">Check
Out</a></li>
                                        <li><a
href="single-product.html">Single Product</a></li>
                                        <li><a
href="cart.html">Cart</a></li>
                                    </ul>
                                </li>
                                <li>
                                    <div class="header-icons">
                                        <a class="shopping-cart"
href="cart.html"><i class="fas fa-shopping-cart"></i></a>
                                        <a class="mobile-hide
search-bar-icon" href="#"><i class="fas fa-search"></i></a>
                                    </div>
                                </li>
                            </ul>
                        </nav>
                        <a class="mobile-show search-bar-icon" href="#"><i
class="fas fa-search"></i></a>
                        <div class="mobile-menu"></div>
                        <!-- menu end -->
                    </div>
                </div>
```

```html
                </div>
            </div>
        </div>
    <!-- end header -->


    <!-- search area -->
    <div class="search-area">
        <div class="container">
            <div class="row">
                <div class="col-lg-12">
                    <span class="close-btn"><i class="fas
fa-window-close"></i></span>
                    <div class="search-bar">
                        <div class="search-bar-tablecell">
                            <h3>Search For:</h3>
                            <input type="text" placeholder="Keywords">
                            <button type="submit">Search <i class="fas
fa-search"></i></button>
                        </div>
                    </div>
                </div>
            </div>
        </div>
    </div>
    <!-- end search arewa -->


    <!-- breadcrumb-section -->
    <div class="breadcrumb-section breadcrumb-bg">
        <div class="container">
            <div class="row">
                <div class="col-lg-8 offset-lg-2 text-center">
                    <div class="breadcrumb-text">
                        <p>Artificial Intelligence</p>
                        <h1>Video Library</h1>
                    </div>
                </div>
            </div>
        </div>
    </div>
    <!-- end breadcrumb section -->


    <!-- products -->
    <div class="product-section mt-150 mb-150">
        <div class="container">

            <!--<div class="row">
                <div class="col-md-12">
                    <div class="product-filters">
                        <ul>
```

```html
                                <li class="active" data-filter="*">All</li>
                                <li data-filter=".strawberry">Strawberry</li>
                                <li data-filter=".berry">Berry</li>
                                <li data-filter=".lemon">Lemon</li>
                            </ul>
                        </div>
                    </div>
                </div> -->


            <div class="row product-lists">
                <div class="col-lg-4 col-md-6 text-center strawberry">
                    <div class="single-product-item">
                        <div class="product-image">
                            <a
href="https://developers.google.com/edu/python"><img
src="assets/img/products/google.png" alt=""></a>
                        </div>
                        <h3>Google's python class</h3>
                        <p class="product-price"><span>google</span> free
</p>
                        <a href="https://developers.google.com/edu/python"
class="cart-btn"><i class="fas fa-shopping-cart"></i> join the course</a>
                    </div>
                </div>
                <div class="col-lg-4 col-md-6 text-center berry">
                    <div class="single-product-item">
                        <div class="product-image">
                            <a
href="https://www.udemy.com/course/pythonforbeginnersintro/"><img
src="assets/img/products/udemy python.png"
alt="https://www.udemy.com/course/pythonforbeginnersintro/"></a>
                        </div>
                        <h3>Introduction to python</h3>
                        <p class="product-price"><span>Udemy</span> free
</p>
                        <a
href="https://www.udemy.com/course/pythonforbeginnersintro/"
class="cart-btn"><i class="fas fa-shopping-cart"></i> Join this course</a>
                    </div>
                </div>
                <div class="col-lg-4 col-md-6 text-center lemon">
                    <div class="single-product-item">
                        <div class="product-image">
                            <a href="single-product.html"><img
src="assets/img/products/product-img-3.jpg" alt=""></a>
                        </div>
                        <h3>Lemon</h3>
                        <p class="product-price"><span>Per Kg</span> 35$
</p>
```

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```html
                    <a href="cart.html" class="cart-btn"><i class="fas
fa-shopping-cart"></i> Add to Cart</a>
                  </div>
              </div>
              <div class="col-lg-4 col-md-6 text-center">
                  <div class="single-product-item">
                      <div class="product-image">
                          <a href="single-product.html"><img
src="assets/img/products/product-img-4.jpg" alt=""></a>
                      </div>
                      <h3>Avocado</h3>
                      <p class="product-price"><span>Per Kg</span> 50$
</p>
                      <a href="cart.html" class="cart-btn"><i class="fas
fa-shopping-cart"></i> Add to Cart</a>
                  </div>
              </div>
              <div class="col-lg-4 col-md-6 text-center">
                  <div class="single-product-item">
                      <div class="product-image">
                          <a href="single-product.html"><img
src="assets/img/products/product-img-5.jpg" alt=""></a>
                      </div>
                      <h3>Green Apple</h3>
                      <p class="product-price"><span>Per Kg</span> 45$
</p>
                      <a href="cart.html" class="cart-btn"><i class="fas
fa-shopping-cart"></i> Add to Cart</a>
                  </div>
              </div>
              <div class="col-lg-4 col-md-6 text-center strawberry">
                  <div class="single-product-item">
                      <div class="product-image">
                          <a href="single-product.html"><img
src="assets/img/products/product-img-6.jpg" alt=""></a>
                      </div>
                      <h3>Strawberry</h3>
                      <p class="product-price"><span>Per Kg</span> 80$
</p>
                      <a href="cart.html" class="cart-btn"><i class="fas
fa-shopping-cart"></i> Add to Cart</a>
                  </div>
              </div>
          </div>

          <div class="row">
              <div class="col-lg-12 text-center">
                  <div class="pagination-wrap">
                      <ul>
```

```
                        <li><a href="#">Prev</a></li>
                        <li><a href="#">1</a></li>
                        <li><a class="active" href="#">2</a></li>
                        <li><a href="#">3</a></li>
                        <li><a href="#">Next</a></li>
                    </ul>
                </div>
            </div>
        </div>
    </div>
    <!-- end products -->


    <!-- logo carousel -->
    <div class="logo-carousel-section">
        <div class="container">
            <div class="row">
                <div class="col-lg-12">
                    <div class="logo-carousel-inner">
                        <div class="single-logo-item">
                            <img src="assets/img/company-logos/1.png"
alt="">
                        </div>
                        <div class="single-logo-item">
                            <img src="assets/img/company-logos/2.png"
alt="">
                        </div>
                        <div class="single-logo-item">
                            <img src="assets/img/company-logos/3.png"
alt="">
                        </div>
                        <div class="single-logo-item">
                            <img src="assets/img/company-logos/4.png"
alt="">
                        </div>
                        <div class="single-logo-item">
                            <img src="assets/img/company-logos/5.png"
alt="">
                        </div>
                    </div>
                </div>
            </div>
        </div>
    </div>
    <!-- end logo carousel -->

    <!-- footer -->
    <div class="footer-area">
        <div class="container">
```

```html
            <div class="row">
                <div class="col-lg-3 col-md-6">
                    <div class="footer-box about-widget">
                        <h2 class="widget-title">About us</h2>
                        <p>Ut enim ad minim veniam perspiciatis unde omnis
iste natus error sit voluptatem accusantium doloremque laudantium, totam
rem aperiam, eaque ipsa quae.</p>
                    </div>
                </div>
                <div class="col-lg-3 col-md-6">
                    <div class="footer-box get-in-touch">
                        <h2 class="widget-title">Get in Touch</h2>
                        <ul>
                            <li>34/8, East Hukupara, Gifirtok, Sadan.</li>
                            <li>support@fruitkha.com</li>
                            <li>+00 111 222 3333</li>
                        </ul>
                    </div>
                </div>
                <div class="col-lg-3 col-md-6">
                    <div class="footer-box pages">
                        <h2 class="widget-title">Pages</h2>
                        <ul>
                            <li><a href="index.html">Home</a></li>
                            <li><a href="about.html">About</a></li>
                            <li><a href="services.html">Shop</a></li>
                            <li><a href="news.html">News</a></li>
                            <li><a href="contact.html">Contact</a></li>
                        </ul>
                    </div>
                </div>
                <div class="col-lg-3 col-md-6">
                    <div class="footer-box subscribe">
                        <h2 class="widget-title">Subscribe</h2>
                        <p>Subscribe to our mailing list to get the latest
updates.</p>
                        <form action="index.html">
                            <input type="email" placeholder="Email">
                            <button type="submit"><i class="fas
fa-paper-plane"></i></button>
                        </form>
                    </div>
                </div>
            </div>
        </div>
    </div>
    <!-- end footer -->

    <!-- copyright -->
```

```html
        <div class="copyright">
            <div class="container">
                <div class="row">
                    <div class="col-lg-6 col-md-12">
                        <p>Copyrights &copy; 2019 - <a
href="https://imransdesign.com/">Imran Hossain</a>,  All Rights
Reserved.</p>
                    </div>
                    <div class="col-lg-6 text-right col-md-12">
                        <div class="social-icons">
                            <ul>
                                <li><a href="#" target="_blank"><i class="fab
fa-facebook-f"></i></a></li>
                                <li><a href="#" target="_blank"><i class="fab
fa-twitter"></i></a></li>
                                <li><a href="#" target="_blank"><i class="fab
fa-instagram"></i></a></li>
                                <li><a href="#" target="_blank"><i class="fab
fa-linkedin"></i></a></li>
                                <li><a href="#" target="_blank"><i class="fab
fa-dribbble"></i></a></li>
                            </ul>
                        </div>
                    </div>
                </div>
            </div>
        </div>
        <!-- end copyright -->


        <!-- jquery -->
        <script src="assets/js/jquery-1.11.3.min.js"></script>
        <!-- bootstrap -->
        <script src="assets/bootstrap/js/bootstrap.min.js"></script>
        <!-- count down -->
        <script src="assets/js/jquery.countdown.js"></script>
        <!-- isotope -->
        <script src="assets/js/jquery.isotope-3.0.6.min.js"></script>
        <!-- waypoints -->
        <script src="assets/js/waypoints.js"></script>
        <!-- owl carousel -->
        <script src="assets/js/owl.carousel.min.js"></script>
        <!-- magnific popup -->
        <script src="assets/js/jquery.magnific-popup.min.js"></script>
        <!-- mean menu -->
        <script src="assets/js/jquery.meanmenu.min.js"></script>
        <!-- sticker js -->
        <script src="assets/js/sticker.js"></script>
        <!-- main js -->
        <script src="assets/js/main.js"></script>
```

```
</body>
</html>
```

5. Contact us

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <meta name="description" content="Responsive Bootstrap4 Shop Template,
Created by Imran Hossain from https://imransdesign.com/">

    <!-- title -->
    <title>Contact</title>

    <!-- favicon -->
    <link rel="shortcut icon" type="image/png"
href="assets/img/favicon.png">
    <!-- google font -->
    <link
href="https://fonts.googleapis.com/css?family=Open+Sans:300,400,700"
rel="stylesheet">
    <link
href="https://fonts.googleapis.com/css?family=Poppins:400,700&display=swap
" rel="stylesheet">
    <!-- fontawesome -->
    <link rel="stylesheet" href="assets/css/all.min.css">
    <!-- bootstrap -->
    <link rel="stylesheet" href="assets/bootstrap/css/bootstrap.min.css">
    <!-- owl carousel -->
    <link rel="stylesheet" href="assets/css/owl.carousel.css">
    <!-- magnific popup -->
    <link rel="stylesheet" href="assets/css/magnific-popup.css">
    <!-- animate css -->
    <link rel="stylesheet" href="assets/css/animate.css">
    <!-- mean menu css -->
```

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```html
        <link rel="stylesheet" href="assets/css/meanmenu.min.css">
        <!-- main style -->
        <link rel="stylesheet" href="assets/css/main.css">
        <!-- responsive -->
        <link rel="stylesheet" href="assets/css/responsive.css">


</head>
<body>


    <!--PreLoader-->
    <div class="loader">
        <div class="loader-inner">
            <div class="circle"></div>
        </div>
    </div>
    <!--PreLoader Ends-->


    <!-- header -->
    <div class="top-header-area" id="sticker">
        <div class="container">
            <div class="row">
                <div class="col-lg-12 col-sm-12 text-center">
                    <div class="main-menu-wrap">
                        <!-- logo -->
                        <div class="site-logo">
                            <a href="index.html">
                                <img src="assets/img/logo.png" alt="">
                            </a>
                        </div>
                        <!-- logo -->

                        <!-- menu start -->
                        <nav class="main-menu">
                            <ul>
                                <li class="current-list-item"><a
href="#">Home</a>
                                    <ul class="sub-menu">
                                        <!--<li><a
href="index.html">Static Home</a></li>
                                        <li><a href="index_2.html">Slider
Home</a></li>-->
                                    </ul>
                                </li>
                                <li><a href="about.html">About</a></li>
                                <li><a href="#">Topics</a>
                                    <ul class="sub-menu">
                                        <li><a
href="artificialintelligence.html">Artificial Intelligence</a></li>
```

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```html
                                        <li><a
href="machinelearning.html">Machine Learning</a></li>
                                        <li><a
href="datasceince.html">Data science</a></li>
                                        <li><a
href="deeplearning.html">Deep Learning</a></li>
                                        <li><a
href="python.html">Python</a></li>
                                        <li><a
href="java.html">JAVA</a></li>
                                        <li><a href="c.html">C and
C++</a></li>
                                    </ul>
                                </li>
                                <li><a href="news.html">News</a>
                                    <ul class="sub-menu">
                                        <li><a
href="news.html">News</a></li>
                                        <!--<li><a
href="single-news.html">Single News</a></li>-->
                                    </ul>
                                </li>
                                <li><a
href="contact.html">Contact</a></li>
                                    <!--<li><a href="shop.html">Shop</a>
                                        <ul class="sub-menu">
                                            <li><a
href="shop.html">Shop</a></li>
                                            <li><a href="checkout.html">Check
Out</a></li>
                                            <li><a
href="single-product.html">Single Product</a></li>
                                            <li><a
href="cart.html">Cart</a></li>
                                        </ul>-->
                                </li>
                                <li>
                                    <div class="header-icons">
                                        <a class="shopping-cart"
href="cart.html"><i class="fas fa-shopping-cart"></i></a>
                                        <a class="mobile-hide
search-bar-icon" href="#"><i class="fas fa-search"></i></a>
                                    </div>
                                </li>
                            </ul>
                        </nav>
                        <a class="mobile-show search-bar-icon" href="#"><i
class="fas fa-search"></i></a>
                        <div class="mobile-menu"></div>
```

```html
                            <!-- menu end -->
                        </div>
                    </div>
                </div>
            </div>
        </div>
        <!-- end header -->


        <!-- search area -->
        <div class="search-area">
            <div class="container">
                <div class="row">
                    <div class="col-lg-12">
                        <span class="close-btn"><i class="fas
fa-window-close"></i></span>
                        <div class="search-bar">
                            <div class="search-bar-tablecell">
                                <h3>Search For:</h3>
                                <input type="text" placeholder="Keywords">
                                <button type="submit">Search <i class="fas
fa-search"></i></button>
                            </div>
                        </div>
                    </div>
                </div>
            </div>
        </div>
        <!-- end search arewa -->


        <!-- breadcrumb-section -->
        <div class="breadcrumb-section breadcrumb-bg">
            <div class="container">
                <div class="row">
                    <div class="col-lg-8 offset-lg-2 text-center">
                        <div class="breadcrumb-text">
                            <p>Get 24/7 Support</p>
                            <h1>Contact us</h1>
                        </div>
                    </div>
                </div>
            </div>
        </div>
        <!-- end breadcrumb section -->


        <!-- contact form -->
        <div class="contact-from-section mt-150 mb-150">
            <div class="container">
                <div class="row">
                    <div class="col-lg-8 mb-5 mb-lg-0">
```

```html
                    <div class="form-title">
                        <h2>Have you any question?</h2>
                        <p>Mail us with your query below.</p>
                    </div>
                    <div id="form_status"></div>
                    <div class="contact-form">
                        <form type="POST" id="fruitkha-contact"
onSubmit="return valid_datas( this );">
                            <p>
                                <input type="text" placeholder="Name"
name="name" id="name">
                                <input type="email" placeholder="Email"
name="email" id="email">
                            </p>
                            <p>
                                <input type="tel" placeholder="Phone"
name="phone" id="phone">
                                <input type="text" placeholder="Subject"
name="subject" id="subject">
                            </p>
                            <p><textarea name="message" id="message"
cols="30" rows="10" placeholder="Message"></textarea></p>
                            <input type="hidden" name="token"
value="FsWga4&@f6aw" />
                            <p><input type="submit" value="Submit"></p>
                        </form>
                    </div>
                </div>
                <div class="col-lg-4">
                    <div class="contact-form-wrap">
                        <!--<div class="contact-form-box">
                            <h4><i class="fas fa-map"></i> Address</h4>
                            <p>34/8, East Hukupara <br> Gifirtok, Sadan.
<br> Country Name</p>
                        </div>
                        <div class="contact-form-box">
                            <h4><i class="far fa-clock"></i> Shop
Hours</h4>
                            <p>MON - FRIDAY: 8 to 9 PM <br> SAT - SUN: 10
to 8 PM </p>
                        </div>-->
                        <div class="contact-form-box">
                            <h4><i class="fas fa-address-book"></i>
Contact</h4>
                            <p>Phone: +91 84 292 10450 <br> Email:
saraswatsuryansh99@gmail.com</p>
                        </div>
                    </div>
                </div>
            </div>
```

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```html
                    </div>
                </div>
            </div>
            <!-- end contact form -->


            <!-- find our location -->
            <div class="find-location blue-bg">
                <div class="container">
                    <div class="row">
                        <div class="col-lg-12 text-center">
                            <p> <i class="fas fa-map-marker-alt"></i> Find Our
Location</p>
                        </div>
                    </div>
                </div>
            </div>
            <!-- end find our location -->


            <!-- google map section -->
            <div class="embed-responsive embed-responsive-21by9">
                <iframe
src="https://www.google.com/maps/d/embed?mid=1nxxfsdOOs2x2HPEsNV-YlJDLFzM&
hl=en" width="640" height="480"></iframe>" width="600" height="450"
frameborder="0" style="border:0;" allowfullscreen=""
class="embed-responsive-item"></iframe>
            </div>
            <!-- end google map section -->



            <!-- footer -->
            <div class="footer-area">
                <div class="container">
                    <div class="row">
                        <div class="col-lg-3 col-md-6">
                            <div class="footer-box about-widget">
                                <h2 class="widget-title">About us</h2>
                                <p>Ut enim ad minim veniam perspiciatis unde omnis
iste natus error sit voluptatem accusantium doloremque laudantium, totam
rem aperiam, eaque ipsa quae.</p>
                            </div>
                        </div>
                        <div class="col-lg-3 col-md-6">
                            <!--<div class="footer-box get-in-touch">
                                <h2 class="widget-title">Get in Touch</h2>
                                <ul>
                                    <li>34/8, East Hukupara, Gifirtok, Sadan.</li>
                                    <li>support@fruitkha.com</li>
                                    <li>+00 111 222 3333</li>
                                </ul>
```

```html
        </div>-->
      </div>
      <div class="col-lg-3 col-md-6">
        <div class="footer-box pages">
          <h2 class="widget-title">Pages</h2>
          <ul>
            <li><a href="index_2.html">Home</a></li>
            <li><a href="about.html">About</a></li>
            <li><a href="services.html">Shop</a></li>
            <li><a href="news.html">News</a></li>
            <li><a href="contact.html">Contact</a></li>
          </ul>
        </div>
      </div>
      <div class="col-lg-3 col-md-6">
        <div class="footer-box subscribe">
          <h2 class="widget-title">Subscribe</h2>
          <p>Subscribe to our mailing list to get the latest
updates.</p>
          <form action="index.html">
            <input type="email" placeholder="Email">
            <button type="submit"><i class="fas
fa-paper-plane"></i></button>
          </form>
        </div>
      </div>
    </div>
  </div>
</div>
<!-- end footer -->


<!-- copyright -->
<div class="copyright">
  <div class="container">
    <div class="row">
      <div class="col-lg-6 col-md-12">
        <p>Copyrights &copy; 2021 <!-- <a
href="https://imransdesign.com/">Imran Hossain</a>-->, All Rights
Reserved.</p>
      </div>
      <div class="col-lg-6 text-right col-md-12">
        <div class="social-icons">
          <!--<ul>
            <li><a href="#" target="_blank"><i class="fab
fa-facebook-f"></i></a></li>
            <li><a href="#" target="_blank"><i class="fab
fa-twitter"></i></a></li>
            <li><a href="#" target="_blank"><i class="fab
fa-instagram"></i></a></li>
```

```html
                                <li><a href="#" target="_blank"><i class="fab
fa-linkedin"></i></a></li>
                                <li><a href="#" target="_blank"><i class="fab
fa-dribbble"></i></a></li>
                            </ul>-->
                    </div>
                </div>
            </div>
        </div>
    </div>
    <!-- end copyright -->


    <!-- jquery -->
    <script src="assets/js/jquery-1.11.3.min.js"></script>
    <!-- bootstrap -->
    <script src="assets/bootstrap/js/bootstrap.min.js"></script>
    <!-- count down -->
    <script src="assets/js/jquery.countdown.js"></script>
    <!-- isotope -->
    <script src="assets/js/jquery.isotope-3.0.6.min.js"></script>
    <!-- waypoints -->
    <script src="assets/js/waypoints.js"></script>
    <!-- owl carousel -->
    <script src="assets/js/owl.carousel.min.js"></script>
    <!-- magnific popup -->
    <script src="assets/js/jquery.magnific-popup.min.js"></script>
    <!-- mean menu -->
    <script src="assets/js/jquery.meanmenu.min.js"></script>
    <!-- sticker js -->
    <script src="assets/js/sticker.js"></script>
    <!-- form validation js -->
    <script src="assets/js/form-validate.js"></script>
    <!-- main js -->
    <script src="assets/js/main.js"></script>
```

Conclusion

Open source is one of the best inventions of humankind, and it has also proven so. It helps the developers in ways possible which were never dreamt of. Open source has created a community of developers working individually still creating a world wide sync without any check or superior power, which is a big task in itself.

Open source has help us in reducing risk factors by maximum cost.
Now developers dont feel the need to hire teams or to work on a project alone and create a negative feel around them, they can easily keep their project open source and take help from other developers in other parts of the world.

We have tried something similar here in the Open Source e- learning platform, and with the dream of making it accessible to every part of the world through the power of open source.

All in all we are trying to reach a consensus where students dont think twice about making their mind to learn something and dont feel helpless when they could not get the proper material for learning.

Chapter 5.2 Future Scope

Open source will be a critical driver of advancement. For instance, instruments like TensorFlow have assisted with democratizing AI by making AI something implementable inside a venture. We will keep on considering open source to be a way to empower development and that's just the beginning and more endeavors will start to look toward open source to drive their future guides.

What's to come is generally here. Clients benefit each day from work being done elsewhere. Facebook just delivered a PC vision object location system which is based on their recently delivered AI library. This isn't to say we'll utilize that, however it may be something that may improve our items. In the interim, we as of now utilize progressed Machine Learning innovations created as a feature of Spark and different tasks. The fate of open source is where best in class state of the art advances are created. This is the place where the genuine nerds and surprisingly regular individuals meet up and cause PCs to do everything from think to make things.

We hope to see the broadest effect around AI and AI. Open source will democratize AI and make a local area of more advancement. We'll likewise see significant headways in holders like Docker and Kubernetes as they are the eventual fate of Open Source.

The fate of open source programming is splendid. An ever increasing number of merchants will contribute new open source programming. Nontraditional

programming organizations like Capital One, which are on the transition to become similar to a product organization, will keep on growing new open norms and contribute to open source programming. Increasingly more open source programming will be written in the AI/Blockchain/IoT space. Open source associations like Apache Foundation will keep on driving new tasks in the open

source space and new imaginative open source networks like openai.com will be set up.

We accept that open source will consistently exist. It's an incredible spot to enhance and foster undertakings rapidly because of the chances to "publicly support" from

extraordinary personalities to tackle serious issues in our industry. Nonetheless, we accept that the product delivered by open source regularly possibly take care of a solitary issue for most organizations when they are really attempting to settle more noteworthy issues and accomplish business results.