



PYTHON FULL STACK

Build a strong understanding of Python programming and web development technologies to become a Full-Stack Python Developer with React. Get hands-on experience with various Django frameworks for backend development and React for frontend development. Create a portfolio of projects by developing end-to-end web applications using Django and React.

Build Your Own Static Website

This course helps you build a strong foundation in web technologies such as HTML, CSS. With this, you will create and publish simple and beautiful websites from scratch. You will be learning by doing projects

Building Web Applications using Gen AI

- Introduction to GenAI in Web Development

Software Development Fundamentals

- Importance of Frontend
- Fundamentals
- Syntax
- Debugging
- Tweaking Code

HTML Basics

- Getting Started
- HTML Elements
- HTML Headings
- HTML Paragraphs
- HTML Button
- HTML Attributes
- HTML Images
- HTML Hyperlinks
- HTML Containers
- HTML Lists

CSS Basics

- CSS Rulesets
- CSS Colors
- CSS Box Model
- CSS Paddings
- CSS Properties
- CSS Units
- CSS Margins
- CSS Borders

Generative AI For Accelerated Learning

- Leveraging Gen AI for accelerated learning
- Leveraging Gen AI for debugging
 - Understanding Errors
 - Fixing Code with Errors
 - Code Explanation
 - Generating Code
- Building a static Website using Gen AI

Bootstrap Components

- Carousel
- Embedding Videos

Industry Readiness

- VS Code Setup
- Chrome Dev Tools
- Online Code Editors



Course Project

Tourism Website

Build your Tourism Website by using
HTML5, CSS3, and Bootstrap

Build Your Own Responsive Website

This course helps you build a strong foundation in web technologies such as HTML, CSS, and Bootstrap. With this, you can create a responsive web application that runs smoothly across all devices, like desktop, tablet, and mobile.

Intermediate CSS

- Block vs inline elements
- CSS Selectors
 - Class Selector
 - Id Selector
 - Type Selector
 - CSS Specificity
- CSS Inheritance
- CSS Cascading
- Pseudo-classes
 - : hover
 - : visited
 - : first-child
 - : last-child
 - : nth-child()

Generative AI For Accelerated Learning

- Building a Responsive Website using Gen AI



Course Project

Food Munch

Build a responsive Food Munch website using HTML5, CSS3, and Bootstrap Grid System.

Bootstrap

- Bootstrap Grid System
 - Container
 - Row
 - Column
- Bootstrap Utilities
 - Display Utilities
 - Flex Utilities
 - Sizing Utilities
 - Spacing Utilities
 - Colors
- Bootstrap Components
 - Navbar
 - Buttons

Industry Readiness

- Framer
- Chrome Dev Tools



Course Project

E-commerce Website

Build a responsive E-commerce website using HTML5, CSS3, and Bootstrap Grid System

Modern Responsive Web Design

CSS Layouting

CSS Flexbox

- Display
- Flex-direction
- Justify-content
- Flex-shrink
- Align-items
- Flex-wrap
- Flex-row
- Order
- Align-content
- Align-self
- Flex-grow

Sizing Elements

- Overflow
- Content Box
- Box Sizing
- Border Box

Generative AI For Accelerated Learning

- Leveraging Gen AI for accelerated learning
- Leveraging Gen AI for debugging
 - Understanding Errors
 - Code Explanation
 - Fixing Code with Errors
 - Generating Code
- Building a Responsive Website using Gen AI

CSS Media Queries

- Media Query
- Media Types
- Media Features
- Width, min-width, max-width
- Height, min-height, max-height
- Orientation
- Combining Multiple Media Queries
 - Logical Operators (and, or, not)

CSS Positioning

- CSS Position properties
- Changing Element's Position
- Changing Positioned Ancestor

Tailwind CSS

Introduction to Tailwind CSS

- Why Tailwind CSS?
- Advantages
- Setting up Tailwind CSS
- Common Utility Classes

Tailwind Display & Responsive Utilities

- flex-row, flex-col, justify-center, etc.
- Grid Utilities (grid grid-cols-, col-span-, etc.)
- Responsive Utilities(sm, md, lg, xl, etc.)

Programming Foundations With Python

You will learn the fundamental concepts of programming and gain the confidence to code in Python. You will learn to write Programs and use the right data structures to solve problems and build modular software with Object-Oriented Principles.

Generative AI For Accelerated Learning

- Maximize Your Learning with AI
- Code Explanation
- Generating Code
- Quiz Generation
- Coding Problem Generation

Fundamentals of Programming

- Operators, Datatypes & Variables
- Strings & Numbers
- Conditional Statements

Generative AI For Accelerated Learning

- Role of Gen AI in Learning
- Leveraging Gen AI for Enhanced Learning(prompts)
 - Understanding Errors
 - Fixing Code with Errors
 - Concept-wise Interview Preparation

Loops & Functions

- Loops
- String Methods
- Functions

Functions & Data Structures

- Recursion
- Lists
- Tuples
- Sets
- Dictionaries

Object-Oriented Programming

- Classes & Objects in Python
- Attributes & Methods
- Encapsulation
- Inheritance
- Abstraction
- Polymorphism

Working with Python Standard Library

- collections
- random
- datetime
- math

Industry Readiness

- Web Scraping using Python
- Online Coding Platforms
- More third-party Packages

Introduction to Databases

Learn about the incredibly prevalent databases today. Through this course, you'll develop strong fundamentals and be proficient in concepts related to Databases and DBMS. Most importantly, you'll also be able to perform powerful queries on databases using SQL.

Relational Databases

- Introduction to SQL
- Database Design
- ACID Properties

Generative AI For Accelerated Learning

- Maximize Your Learning with AI
- Query Explanation
- Concept Explanation
- Generating Query

SQL Operations

- CREATE
- SELECT
- DELETE
- INSERT
- UPDATE

Advanced SQL Modeling

- ER Model
- Creating a Relational Database

Advanced SQL

- Joins
- Subqueries
- Indexes
- Views

GenAI for SQL Development

- Translating business requirements to SQL with AI
- Debugging with AI Assistance
- Query optimization with AI assistance

Industry Readiness

- Setting up a local database server
- Querying in VS Code

Django

This Django course covers project setup, model creation, and Django admin integration. You'll learn CRUD operations, work with Django REST Framework for APIs, and gain skills in deploying full-stack Django applications.

Django Setup & Fundamentals

- Creating a Project and Running the Development Server

Django Apps

- Templates and Static Files
- Models and ORM Basics
- Migrations
- Django Admin Interface
- QuerySets and Relationships
- URL Routing and Path Parameters
- Forms and ModelForms
- Handling GET and POST Requests
- Django Messages Framework
- CRUD Operations with Django ORM
- Pagination and Filters

Models & Admin Integration

- Creating Models
- Migrating Models
- Django Admin Setup
- Customizing Admin Interface
- Registering Models in Admin
- Admin Actions and Filters

Introduction to REST APIs

- Installing and Configuring DRF
- Serializers
- ViewSets and Routers
- Class-Based Views vs Function-Based Views
- Generic Views and Mixins
- Filtering, Searching, and Pagination
- Validations and Custom Validators
- Relationships in APIs
- Exception Handling and Custom Error Responses
- Permissions and Authentication
- Token Authentication
- JWT Authentication
- Using Postman for API Testing
- Versioning and CORS Setup

Advanced Django Concepts

- Middleware
- Signals and Receivers
- File Upload and Media Handling
- Payment Gateway Integration
- Working with Images
- Email Functionality
- Asynchronous Tasks
- Caching
- Logging and Debugging in Django
- Class-Based Views
- Environment Variables and .env Configuration
- Database Management
- API Documentation using drf-spectacular / Swagger



Course Project

E-commerce Application

Build an Ecommerce backend application using Django

Build Your Own Dynamic Web Application

Introduction to JavaScript

- Data Types, Variables, Basic Operators
- Conditionals, Loops, Functions
- Arrays, Objects, Control Flow
- Comments, Math Function

DOM Manipulation

- Introduction to the DOM
- Select and Manipulate DOM Elements
- Manipulating Style, Text, and Content

Forms

- HTML Form Elements (input, select, button)
- Form validations and Input

Array Methods

- Push, Unshift, Pop, Shift
- Find, IndexOf, Concat

Events, Fetch & Callbacks

- Event Listeners
- Callbacks, setTimeout, clearTimeout
- HTTP Requests using Fetch
- Working with JSON data



Course Project

Todos Application

Build a Todos Application using HTML5, CSS3, and JavaScript

JavaScript Essentials

In this course, you will learn key JavaScript concepts such as events, scope, hoisting, classes, error handling, and asynchronous JavaScript.

Rest Parameters and Spread Syntax

- Destructuring Arrays and Objects

Asynchronous JS

- Async/Await
- Promises

Array Methods

- map, filter, reduce

String Manipulations

- trim, split, toUpperCase, toLowerCase, includes

React JS

In this course, you will learn how to build stateful web applications with the ReactJS library. Upon completion, you will be comfortable creating an application in ReactJS from scratch.

Introduction to React JS

- Why React?
- Introducing JSX
- Rendering Elements, Components, and Props

State and Effect Hooks

- `useState()`, `useEffect()`
- Handling Events
- Component Life Cycle

Routing

- `useParams()`, `useNavigate()`
- Protected Route with JWT Authentication

React Context

- use() Provider Component



Course Project

E-commerce Application

Build an Ecommerce application using
React JS

Django and React Integration

- Introduction to Django and React
- Setting Up Django Backend
- Setting Up React Frontend
- Fetching Data from Django API in React
- CRUD Operations with Django and React
- Authentication with Django and React
- Basic State Management in React
- Final Integration and Building the Full App

Capstone Project - Social Networking Web App

In this project, you will develop a Social networking web app with popular features like posts and comments.

Workshops

Gen AI

- Explore Generative AI, understanding its principles and applications.

Git Basics

- Learn the fundamentals of Git and how to manage code efficiently in software development.