**upGrad Campus**

Certification Program in

# FULL STACK DEVELOPMENT

**Course duration:** 8 months
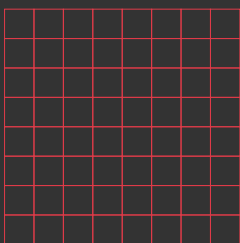
## About Us

upGrad Campus is a
### video learning platform for online education,

with certificate courses specially curated for college students and young adults. As an affiliate of upGrad, India's largest online higher education company, upGrad Campus aims at making every graduate job-ready, with professional skills and practical know-how for the most sought-after fields of work.

> Our aim is simple: We strive to create high-impact, hands-on experiences that prepare learners for meaningful and productive careers.

**Ronnie Screwvala**

Co-founder and Executive Chairman, upGrad

# Full Stack Development is taking the world by storm

## But what is it?

When you navigate easily through a website or see those interactive designs on apps, a full stack developer is at work to make every experience easy for you. A full stack developer has knowledge of each layer of an application and possesses both technical and soft skills to assess a situation. Full Stack Developers are engineers who work on both the client-side and server-side of the software application.

"Full-stack" refers to a group of programming languages and tools a developer learns to handle both the front-end and back-end development of a website and applications.

## Who should sign up for our certification course?

If you are a student with an engineering background who aspires to work as a Full Stack Developer/Software Developer/Reliability Engineer in companies across industries after completing their engineering degree, this is for you.

# Why Become a Full Stack Developer?

### Tech boom
The IT and Tech industry in India has grown exponentially in the last few years and this industry will be worth around 350 billion by 2025.

### Most sought-after role in the world
According to the United States Bureau of Labour Statistics, there will be 8,53,000 open job roles for Full Stack Developers by the year 2024. In India alone, there has been a 30% increase of open positions for Full Stack Developers since 2021.

### High salary
According to a survey by Indeed, the average salary for a talented Full Stack Developer is more than the average salary of any other software developer in the industry.

### Learn something new every day
This job continuously influences you to learn new things constantly. With the dynamic nature of the tech industry, doing the same work for a long time may bore you. At that particular time, upgrading your skills and knowledge will really help you a lot.

### Find what you love most
Full Stack Development lets you get comfortable with a wide array of software. It also allows you to dive deep into the areas you like the most.

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# Why Opt for Certificate Course in Full Stack Development with upGrad Campus?

### The best mentors
Learn everything about Full Stack Development from the top experts in the field. Attend live lectures, doubt-clearing sessions and more.
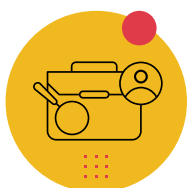
### Customised curriculum
Get the top skills you need to make it as a Full Stack Developer in your dream company. The curriculum is designed to set a strong base for you in Object Oriented Programming, Data Structures and Algorithms and a high-level understanding of MERN (MongoDB, Express.js, React and Node.js). Further, this course helps you specialise in advanced front-end or back-end development, based on your career goals.

### Student Support
Strong and friendly assistance from dedicated students throughout the program helps you clear your doubts. Our TAs will help you support you in learning the subject with doubt-clearing sessions during the week and practical hands-on training over the weekend. Join the hangout sessions, where you can learn and enjoy with subject matter experts and strengthen your conceptual learning. Be a part of the discussion forums, to resolve your queries and reinforce learning.

### Ready Set Go for Your Job
You will get to learn industry-relevant skills that will give you an understanding of the challenges and opportunities in the organisations in the tech space, and apply these learnings in live projects.
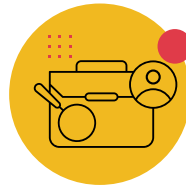
# Benefits of the Program

### Learn the industry-relevant skills
Develop most sought after skills in today's tech industry in Live Sessions by top industry experts.

### Get practical industry knowledge
Apply your learnings in live projects and assignments and case studies.

### Crack tech interviews
Get a strong foundation in Object Oriented Programming, Data Structures and Algorithms and MERN, needed to crack the tech interview rounds in your dream company.
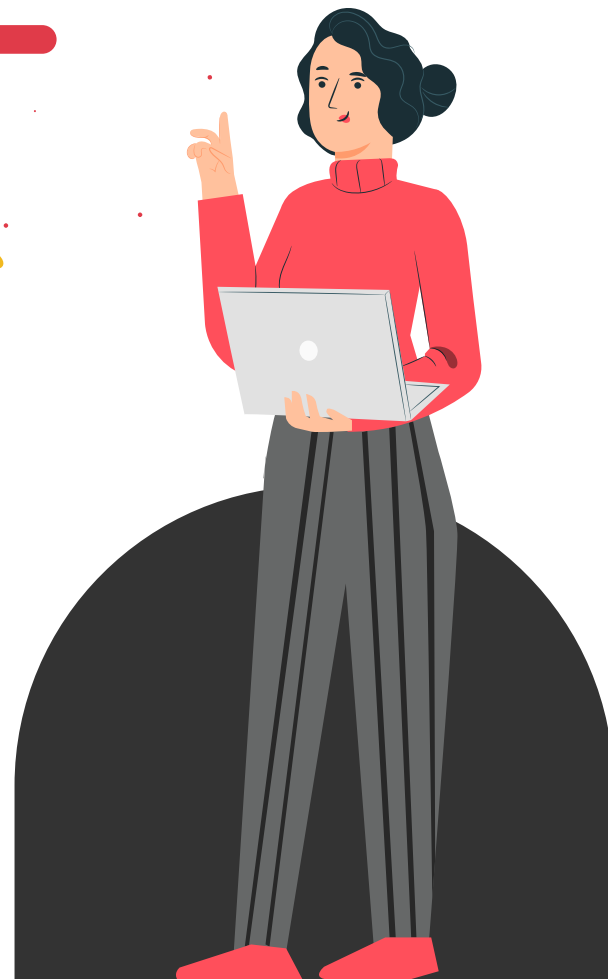
### Receive personalised assistance
Get personalised subjective feedback on your submissions and improve your skills.

### Stand out with an impressive certificate
Receive a personalised certification, signed by the CEO of upGrad Campus, that highlights your specialisation (Front-end Development/ Back-end Development).

# Course Structure

## **Get 250+ hours** of content through

### LIVE Classes

Attend LIVE sessions by industry experts.

### Recorded Videos

Learn through pre-recorded videos from industry leaders.

### TA Sessions

Practical and interactive doubt clearing sessions,

project sessions, etc.

### Choose Any One Specialisation

1)  Advanced Front-end Development using React
2)  Advance Back-end Development with Node.js
    and Mongo DB

# Course Curriculum

## Object Oriented Programming in Java

Variables and Datatypes

Conditionals, Loops and Functions

Abstraction and Encapsulation

Inheritance and Polymorphism

Arrays and Linked Lists

**Discussion Forum Project** - In this project, learners will use OOP to promote code reuse, thereby, increasing developer productivity and reducing potential errors and bugs in their program.

## Algorithm Analysis and Design Techniques

Algorithm Analysis

Searching and Sorting Algorithms

## Data Structures

Stacks and Queues

HashTables, HashMaps and HashSets

Binary Trees and Binary Search Trees

Priority Queues and Heaps

Graphs and Graph Algorithms

## Foundations of Web Development

Internet and Networking Basics

HTML and CSS

JavaScript

Backend Integration using HTTP

**Blogging Website Project** - In this project, students will apply their knowledge of HTML , CSS and JavaScript to create a blogging website.
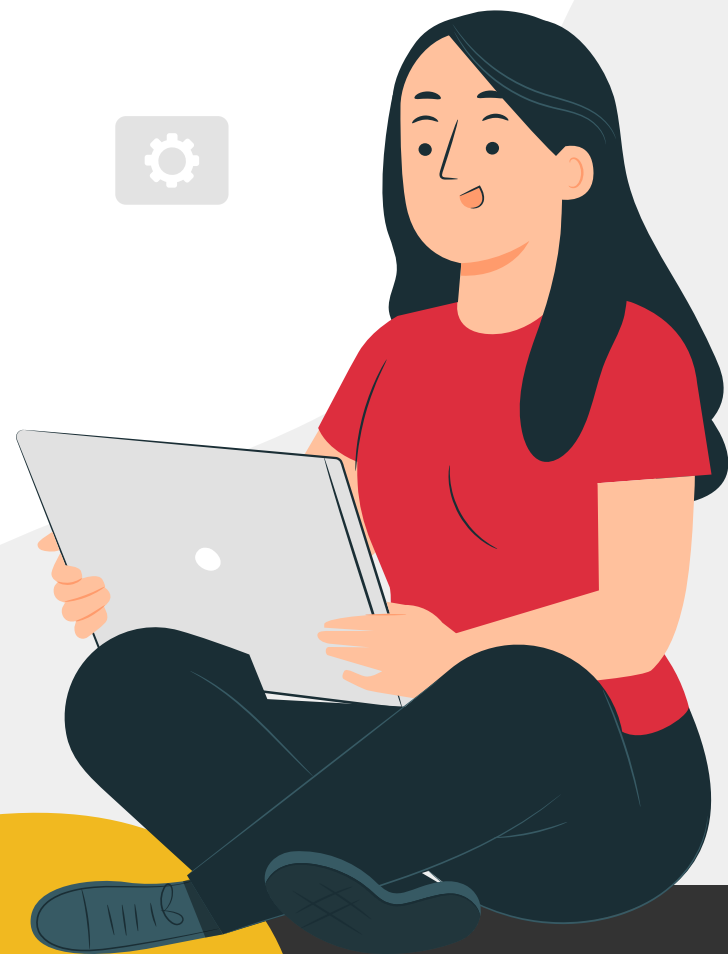
## Introduction to MERN

React

Node.js

MongoDB

Express.js

## Advanced Front-end Development Using React.js (Elective I)

### React.js - Part I

JSX

Rendering Elements into the DOM

Props

Components & Component Lifecycle

Routing

### React.js - Part II

React Hooks

Forms Validation Using Material UI

Back-end Integration

Redux

### Capstone Project - BookMyMovie

In this project, users can browse upcoming and released movies, filter released movies based on certain parameters, and view details such as genre, artists and trailers of released movies.

## Advanced Back-end Development with Node.js & MongoDB (Elective II)

### Fundamentals of Node.js
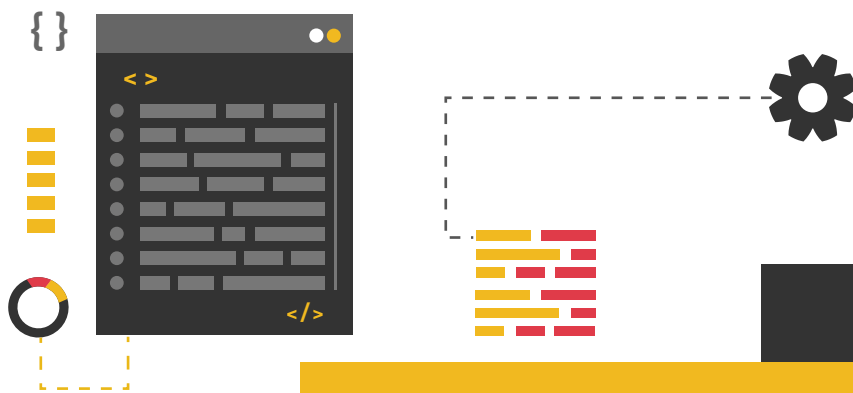
Core Concepts of Node.js

Modules and Packages

### NoSQL Databases and MongoDB

Querying in MongoDB

### Express.js

### Capstone Project - BookMyMovie

This project aims to develop the back-end of a real-world application in Node.js, Express.js and MongoDB. With the Movie Booking application, users can browse the upcoming and released movies, filter the released movies based on certain parameters, view details such as genre, artists, and trailers, and book tickets as well.
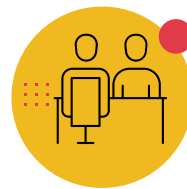
# Placement and Career Support

### Polish your CV

An impressive CV will help you introduce yourself to the industry before you appear for an interview. We provide constructive feedback from industry experts, that makes sure your CV stands out.

### Get access to upGrad's exclusive job portal

Here you can increase your chances of landing an interview with a prospective employer by three-fold.

### Get job-ready

Mock interviews with industry experts is the key to preparedness for you to face the employers in the real world with confidence.

### Learn soft skills

Get trained on group discussions and your personal skills with upGrad Campus training sessions.

### Pick what's best for you

Talk to our experts to identify the best-suited career opportunities for you.

### Receive job offers

You can secure a job after 3-6 months of enrollment with us through our hassle-free process.

*These benefits are a part of the Placement Plus program, available at an additional fee.

# Program Details

### Course starts
**Please refer to the website for program start dates**

### Duration
**8 months**

### Fee structure
~~₹ 40,000~~ **₹ 35,000/-**

### Program hours
**250+ Learning Hours Live Sessions every weekend**

For admissions, contact

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**admissions.campus@upgrad.com**

**upGrad Campus**