



JOB-LINKED
PG CERTIFICATION IN
**SOFTWARE
ENGINEERING**

FRONT END

BACK END





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in Software Engineering?

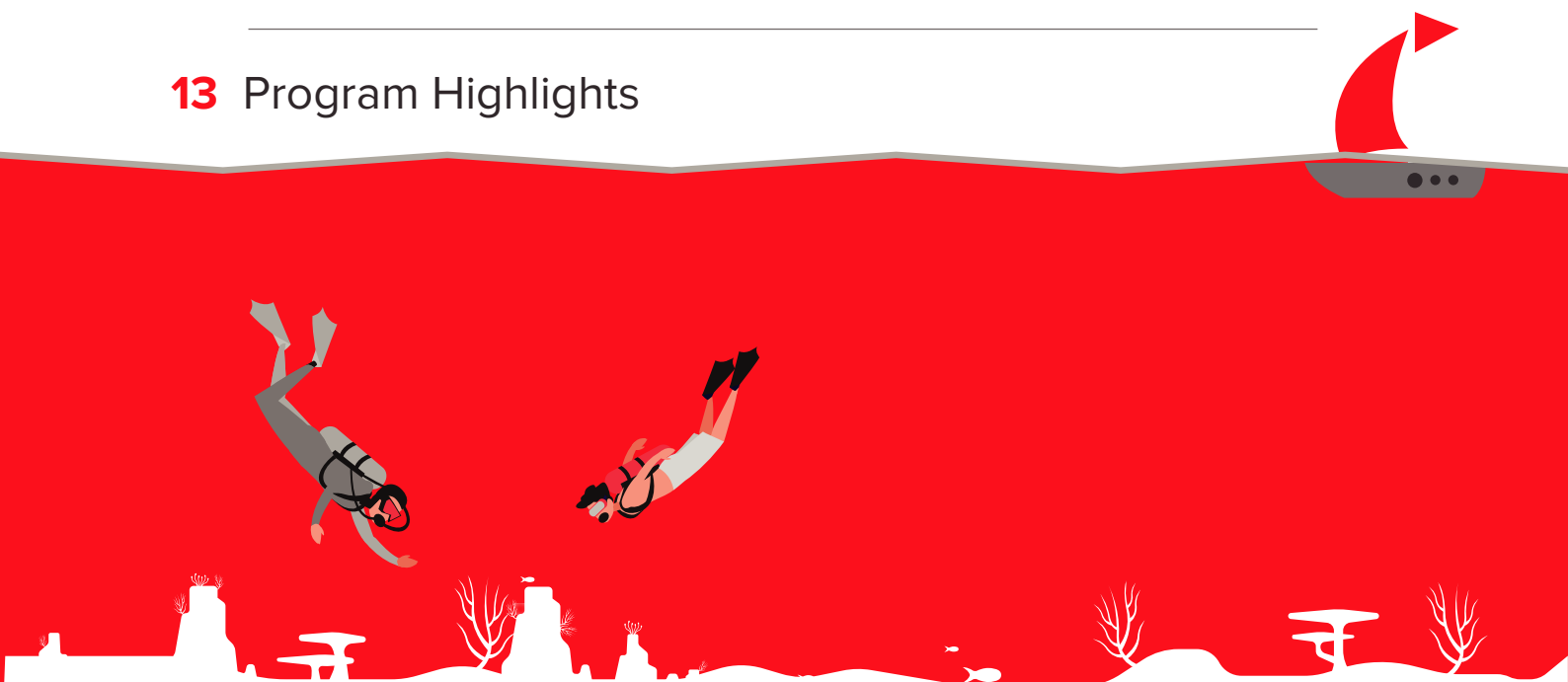
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ABOUT UPGRAD

upGrad is an online education platform to help individuals develop their professional potential in the most engaging learning environment. We, at upGrad, aim to upskill working professionals in new-age emerging technologies. With an exponential increase in demand for skilled professionals.

With our meticulously designed upGrad's Job-linked PGC in Software Engineering, we equip you with conceptual knowledge, give you hands-on experience and ensure you start a successful career in the industry. At upGrad, we aim to significantly leverage technology in order to transform the way education is delivered in the digital age.



“

**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 & Executive
Chairman

upGrad









INTRODUCTION TO THE PROGRAM

The upGrad's Job-linked PGC in Software Engineering, offered by upGrad, is a 5 month program that focuses on polishing skills in the tech domain, and employability.

We are confident that every candidate can receive a placement offer if they successfully complete our program. In case that doesn't happen, upGrad will refund* the program fee.

This program will help you build strong fundamentals of Data Structures & Algorithms, Object-oriented Design, Analysis & Programming in Java, AWS, SpringBoot, Cloud Native, HTML, CSS, along with MERN stack (MongoDB, ExpressJS, ReactJS, NodeJS). The training will be completely online with mix of live and recorded sessions from industry subject matter experts. The Program will take the learners through a structured pedagogy consisting elements like assignments, hands-on projects, assessments, aptitude and soft-skills training to make them employable in tech domain. Learners have to complete all the elements and follow our placement guidelines to secure their first job in software roles.

Who is this program for?

- 
-  First-time software job seekers i.e. either final year students or recent unemployed graduates
 -  Everyone aspiring to secure entry-level jobs in software development domain
 -  Check eligibility criteria for more details



WHY UPGRAD'S JOB-LINKED PGC IN SOFTWARE ENGINEERING?

Program Highlights:



Placement assurance
or money back*



Certification in Software Engineering
with specialization in MERN
stack (or) Cloud Native



Sessions with
industry experts



Real-time projects to
build your portfolio



Placement preparation
& career guidance



PROGRAM CURRICULUM

■ COMMON CURRICULUM

- | | | |
|-----------|---|--|
| 01 | FOUNDATIONS OF PROGRAMMING
(PREPARATORY COURSE) | <i>(30 hours)</i> |
| | <ul style="list-style-type: none">• Java - Variables and Datatypes• Java - Conditionals, Loops & Functions | |
| 02 | FOUNDATIONS OF PROGRAMMING
(CRASH COURSE) | <i>(24 hours)</i> |
| | <ul style="list-style-type: none">• Understanding Java | |
| 03 | OBJECT-ORIENTED ANALYSIS, DESIGN
& PROGRAMMING | <i>(46 hours)</i> |
| | <ul style="list-style-type: none">• Version Control System• Object-Oriented Analysis & Design• Object-Oriented Programming | <i>(5 hours)</i>
<i>(9 hours)</i>
<i>(24 hours)</i> |
| | COURSE PROJECT | <i>(13 hours)</i> |
| 04 | DATA STRUCTURES & ALGORITHMS | <i>(105 hours)</i> |
| | <ul style="list-style-type: none">• Problem-Solving• Building Blocks• Elementary Data Structures• Advanced Data Structures | <i>(26 hours)</i>
<i>(26 hours)</i>
<i>(26 hours)</i>
<i>(26 hours)</i> |
| | HACKATHON | <i>(1 hours)</i> |





MERN STACK SPECIALIZATION

- | | | |
|-----------|---|------------|
| 01 | INTRODUCTION TO WEB DEVELOPMENT
<ul style="list-style-type: none"> Basics of Internet and Networking (10 hours) HTML (18 hours) CSS and Bootstrap (35 hours) PROJECT (5 hours) | (68 hours) |
| 02 | JAVASCRIPT
<ul style="list-style-type: none"> Basics of JS (10 hours) Intermediate JS concepts (10 hours) DOM Manipulation (10 hours) ES6 (10 hours) Advanced JS Concepts (10 hours) PROJECT (2 hours) | (52 hours) |
| 03 | SERVER SIDE COMMUNICATION
<ul style="list-style-type: none"> JSON + AJAX (13 hours) PROJECT (2 hours) | (15 hours) |
| 04 | REACT + REDUX
<ul style="list-style-type: none"> Basics of React (23 hours) React Events and Forms (10 hours) React Routing (18 hours) Single Page Applications (13 hours) Testing React application (5 hours) Redux (13 hours) PROJECT (10 hours) | (92 hours) |
| 05 | NODEJS, EXPRESSJS AND MONGODB
<ul style="list-style-type: none"> Introduction to NodeJS (15 hours) Introduction to ExpressJS (5 hours) Routing Parameters (8 hours) Introduction to Databases (10 hours) Introduction to MongoDB (5 hours) Express + MongoDB (16 hours) Introduction to Mongoose (5 hours) User Authentication (5 hours) Unit Testing and Mocking (8 hours) PROJECT (10 hours) | (87 hours) |
| 06 | CAPSTONE PROJECT | (45 hours) |



■ CLOUD-NATIVE SPECIALIZATION

01	JAVA (PREPARATORY COURSE)	(10 hours)
	<ul style="list-style-type: none"> Exception Handling and Annotations (5 hours) Collections (5 hours) 	
02	CLOUD AND DATABASES	(80 hours)
	<ul style="list-style-type: none"> Fundamentals of Linux (10 hours) Internet & Networking Basics (10 hours) Introduction to Distributed Systems (Optional) (0 hours) Introduction to Cloud & AWS (20 hours) SQL and Relational Database Management Systems (20 hours) Hands-on with NoSQL - MongoDB (20 hours) 	
03	DESIGN & DEVELOPMENT OF MICROSERVICES	(200 hours)
	<ul style="list-style-type: none"> Introduction to Spring Core & Spring boot (20 hours) Data Access Layer & Service Layer (20 hours) Introduction to Backend Architecture - Monolithic & Service Oriented Architecture, Microservices (20 hours) Introduction to Microservices; Designing Applications using Microservices[HLD] (20 hours) Introduction to REST & Controller layer (40 hours) AOP - Aspect Oriented programming & Application Security (20 hours) Discovery & Communication Among Microservices (20 hours) Non-blocking Application (Messaging Queues) - Kafka (20 hours) 	
	PROJECT (20 hours)	



■ CLOUD-NATIVE SPECIALIZATION

04 OPTIMISATION AND DEPLOYMENT OF CLOUD-NATIVE APPLICATIONS (80 hours)

- Introduction to Serverless Architecture + Serverless Development (Optional) (0 hours)
- Web Application Optimisation (10 hours)
- Microservices - Debugging and Trouble Shooting (10 hours)
- Introduction to Spring Cloud and Deployment (Optional) (0 hours)
- Containers vs. VMs. Resource Efficiency. Dockers as case study. (20 hours)
- Concepts of Cloud Deployment & Deployment using Kubernetes & Serverless Deployment (20 hours)
- PROJECT** (20 hours)

05 CAPSTONE PROJECT (45 hours)





PLACEMENT STATS

1.

HIGHEST CTC:

7 LPA

2.

AVERAGE CTC*:

4.5 LPA

OUR LEARNERS WORK AT

FIS

PRODAPT

TECH MAHINDRA

QUALYS

CYBER GROUP

WECREATEPROBLEMS

WNS

TRELL

YELLOW MESSENGER

APPLICATEAI

KEKA

SAPPHIREIMS

ZS ASSOCIATES

SPRINGWORKS

DATAGROKR

RAZORPAY



HEAR FROM OUR LEARNERS



SHASHANK MATHUR
Associate Software Engineer, Sapphire

All credit goes to the wonderful Job-linked PG Certification in Software Engineering by upGrad. It helped me upscale my skillsets, identify possible job openings and finally achieve the job offer. I really appreciate all that upGrad has done for me.



RAJKUMAR DAS
Associate Software Engineer, Sapphire

All credit goes to the wonderful Job-linked PG Certification in Software Engineering by upGrad. It helped me upscale my skillsets, identify possible job openings and I really appreciate all that upGrad has done for me. While the world is still recovering from this pandemic, assuring young champs with “Job Assurances” is so comforting. Keep rocking upGrad with such wonderful programs.



ASHISH TYAGI
IT Trainee, FIS

My journey with upGrad was great. I got to learn technologies that would be beneficial for my career. The entire team of upGrad was supportive and guided me in all the stages from choosing the best program to finally getting the dream job.

**MUHSIN JAMAL****Software Engineer, Applicate AI**

I would like to thank upGrad for helping me get a Software Engineer job. It was an amazing journey got so much to learn in this 3 months, the modules, assessment, employability tests were really helpful to gain practical knowledge on coding. I'm glad to be a part of upGrad and wish to continue to be a part of upGrad team. I want to thank each and everyone who were a part of my journey, thank you Radhika for your support throughout the course and looking forward to get the same support till the completion of the course.

**APRAMEYA JAMADAGNI****Associate Quality Engineer,
Finastra Software Solutions**

During my time in this program, I met many amazing teachers who were really passionate about what they were teaching. This gave me confidence that I can learn the tough concepts with ease with the help of these teachers. Our student mentor, Radhika ma'am was also very co-operative and understanding. She made sure that she would understand each and every student's problems and give them a personalised solution.

**RUTU GAIKWAD****App Developer, Qualys**

It was an excellent platform and a great experience. I have cracked this interview because of the upGrad mentorship. Great content, excellent speakers, and the mentors guided me throughout. They helped me in preparing and clearing the interview. Thank you upGrad!



SAMPLE COURSE PROJECTS

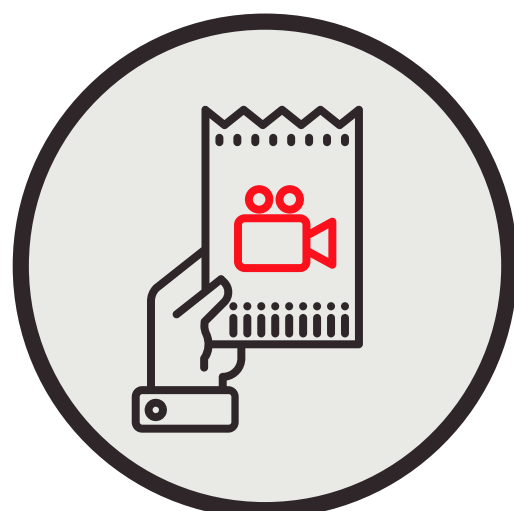


RECIPES APPLICATION

This application will allow you to share detailed recipes of a variety of dishes. You will use HTML, CSS, JavaScript and AJAX to build this application.

HOTEL BOOKING APPLICATION

Learn to develop a dynamic website using HTML, CSS, JavaScript and AJAX. The application will help you search for hotels in different cities across the world and make bookings



MOVIE BOOKING APPLICATION

Learn how to build a full-stack application using React in the frontend, NodeJS and ExpressJS in the backend and MongoDB as the database. You would learn to develop an online movie booking application that supports features like book ticket, search for movies, register etc. This project will give you hands-on experience of how to create a full-stack web application.



SAMPLE COURSE PROJECTS



CAR RENTING APPLICATION

Develop an application to rent cars that has features such as create profile, add cars, book cars for a duration of your choice. Learn to create the backend for a web application in NodeJS and ExpressJS, perform CRUD operations on MongoDB and build a dynamic real-time frontend using React.

E-COMMERCE WEBSITE

Learn how to create the backend for a web application in NodeJS and ExpressJS and frontend using React. In the back-end, also learn how to interact with the database layer for performing CRUD operations with MongoDB. The application will allow the admin to add/remove products to/from the inventory and customers to browse and order products from different categories.





PROGRAM HIGHLIGHTS

PROGRAM DURATION

5 months

ADMISSIONS PROCEDURE

Step 1: Submit your application.

Step 2: Clear Screening Test (Aptitude + Writing + Programming Logic).

Step 3: Block your seat and close the balance fee.

PROGRAM FEE:

INR 99,000 (Inclusive of taxes)

ELIGIBILITY CRITERIA:

- 2017-20 passout from BE/BTech/ME/MTech - any stream (or) BSc/MSc - CS/IT stream only (or) BCA/MCA
- 2021 graduates are eligible if they complete graduation in next 3 months
- Minimum 55% in Graduation & Post-Graduation
- Minimum 60% in 10th & 12th/Diploma

FOR FURTHER DETAILS, CONTACT US AT:

techacademy@upgrad.com or 18002102020