

# TechLeap Academy



TECHLEAP ACADEMY

UNLOCK YOUR INTELLECTUAL GRACE

ADVANCED CERTIFICATION PROGRAM IN

# FULL STACK DEVELOPMENT

Powered by: **IBM**

# Table of content :

- About Us
- Program Overview
- Tools & skills learnt
- Job Opportunities

- Detailed Curriculum
- Recruitment Partners
- Code of Conduct
- Contact Us



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# About us:

TechLeap Academy is an EdTech Platform, offers a diverse range of programs designed to match your ambitions and career goals. Whether you're just starting your journey in technology or looking to upskill, our carefully curated courses provide the perfect blend of theory and hands-on experience.

From software development and web technologies to digital marketing, data analytics, and emerging tools, our programs are built with industry demand in mind. Each course is led by experienced mentors who guide you through real-world projects, ensuring you gain the confidence and expertise to succeed.

## Program Overview

### Phase-1 (Application & Onboarding)

1.----- Application Submission-----2.----- Application Submission

### Phase-2 (Journey Begin)

1.----- Basic Quiz-----2.-----Self Analysis Drill



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## Phase-3 (Let's start mentorship)

- 1.-----Data Science & Analytics (Basic to advance)
- 2.-----LIVE sessions + weekly challenges.
- 3.----Guidance of Industry Mentor

## Phase-4 (Ready to join the industry)

- 1.----- Live Projects-----
- 2.-----Phase Test-----
- 3.-----Internship Opportunities-----
- 4.-----Career Assistance Session-----
- 5.-----Mock Interviews



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# IBM Certification

1. -----3+ Industrial Expert Guest Sessions
2. -----IBM Certification
3. -----3+ Advanced Projects

# Tools & skills learnt

HTML & CSS



Express.js

EXPRESS Js

React.js



Node.js



JavaScript (ES6+)



Version Control  
(e.g., GitHub)



Database  
Management and ORM



API Design and Documentation:  
Knowledge of RESTful API design  
principles, API documentation tools  
(e.g., Swagger, Postman)

# Job Opportunities

Full Stack Developer  
(₹5-8 lakhs per annum)

Frontend Developer  
(₹4-7 lakhs per annum)

Backend Developer  
(₹5-8 lakhs per annum)

MERN Stack Developer  
(₹5-8 lakhs per annum)

(Cloud Engineer)  
(₹6-15 lakhs per annum)

UI/UX Developer  
(₹4-9 lakh per annum)

JavaScript Developer  
(₹5-8 lakhs per annum)

Web Application Developer  
(₹5-8 lakhs per annum)

# Curriculum



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**Week 1** – Web Development Foundations - Introduction to Web Development & Internet basics - HTML5: structure, semantic elements, forms, media - CSS3: selectors, box model, flexbox, grid, animations - Basics of Responsive Design (media queries, units) - Hands-on: Create a responsive portfolio webpage.

**Week 2** – Advanced CSS & JavaScript Fundamentals - CSS Frameworks (Bootstrap / Tailwind CSS) - JavaScript basics: variables, data types, operators - Control flow: loops, conditionals - Functions (regular, arrow functions), scope - DOM manipulation (querySelector, events, styles) - Hands-on: Interactive landing page with animations.

**Week 3** – Advanced JavaScript & ES6+ Features - Arrays & Objects (methods: map, filter, reduce) - Template literals, destructuring, spread/rest operators - Modules (import/export) - Event bubbling, delegation - LocalStorage & SessionStorage - Hands-on: To-do list app with LocalStorage.



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**Week 4** – Git, GitHub & Project Workflow - Version control with Git (init, add, commit, push) - Git branching, merging, resolving conflicts - GitHub repositories & collaboration workflow - Introduction to Agile & Scrum methodology - Hands-on: Push first mini-project to GitHub.

**Week 5** – React Basics - Why React? SPA vs MPA - React components (functional) - JSX & rendering lists - Props & State management - Event handling in React - Hands-on: Build a digital clock & counter app.

**Week 6** – React Advanced Concepts - Conditional rendering - Forms & controlled components - React hooks: useState, useEffect - React Router: navigation & dynamic routes - Hands-on: Recipe Finder App using API integration

**Week 7** – State Management & Project Setup - Context API & useContext hook - Introduction to Redux (concepts, store, actions, reducers) - React Project Structure & Best Practices - Hands-on: E-commerce frontend UI with React & Redux.

**Week 8** – Backend with Node.js - Introduction to Node.js & npm - Modules (built-in & third-party) - File system, events, streams - Express.js basics (routes, middleware, error handling) - REST API fundamentals - Hands-on: Basic REST API with Express.

**Week 9** – Express & API Development - Advanced Express (middleware, routing, error handling) - Postman for API testing - REST API best practices - Hands-on: CRUD API for Blog Posts.

**Week 10** – MongoDB & Database Integration - Introduction to NoSQL & MongoDB - CRUD operations in MongoDB (Compass & CLI) - Mongoose ORM (schemas, models, validation) - Connecting MongoDB with Express - Hands-on: User Management System with MongoDB.

**Week 11** – Authentication & Security - User authentication (JWT, bcrypt) - Authorization (role-based access) - Securing APIs (helmet, CORS, rate limiting) - Hands-on: Login & Signup API with JWT.

**Week 12** – Full MERN Integration - Connecting React frontend with Node/Express backend - Axios / Fetch API in React - Handling async requests & responses - Hands-on: MERN To-Do App (Frontend + Backend + DB)

**Week 13** – Advanced MERN & File Uploads - Image/file upload with Multer - Cloud storage (Clouinary / AWS S3 basics) - Pagination & filtering in APIs - Hands-on: MERN Blog App with Image Uploads.

**Week 14** – Testing & Deployment - Unit testing with Jest & React Testing Library - API testing with Supertest Deployment on cloud (Heroku, Vercel, Netlify) - Environment variables & config - Hands-on: Deploy MERN Project online.

**Week 15** – Capstone Project Development - Project planning & wireframing - Divide into modules: Auth, Dashboard, CRUD, Payment - Start building Capstone Project (MERN App) - Weekly reviews & mentor feedback.

**Week 16** – Final Project & Presentation - Complete Capstone Project with team/individual effort - Add features like authentication, role-based access, CRUD, and deployment - Prepare documentation (README, API docs) - Project presentation & submission - Career guidance: Resume, LinkedIn, GitHub portfolio setup

Capstone Project Ideas:

1. E-Commerce Platform (with cart, payment, orders)
2. Social Media App (posts, likes, comments, follow system)
3. Job Portal (job listings, applications, recruiter dashboard)
4. Online Learning Platform (courses, quizzes, progress tracking)

# Recruitment Partners



# Code of Conduct

**Program Structure:** Skill Development Track: We will focus on enhancing skills and knowledge with LIVE sessions from industry mentors.

**Certification:** Successful completion of the program, including assessments, projects, and attendance, will lead to gaining Completion Certificate and Project Certificate. Internship Certificate will be provided by the company you'll be interning with, if any. Career Track **(Early Career Opportunities):** We will provide opportunities for early career development through internships.

**Code of Conduct Class Schedule and Attendance:** Regular Classes: Classes will be held two times a week on a consistent schedule. Evening Time Slots: Class timings will be in the evening slot between 6:30 PM - 10:00 PM, and each session will last approximately 1-1.5 hours.

**Mandatory Attendance:** A minimum of 70% attendance in live classes is required. Certification Criteria: Certifications will only be issued to students who maintain the required attendance.

## Contact Us

### **Course starts:**

Classes from first week of the month

### **Program hours:**

50+ learning hours

4+ Industrial Projects



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**For admissions, contact:**

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