

MERN STACK MASTERY

SYLLABUS

www.keertikaonline.com





Welcome Message

Welcome to Keertika Online's MERN Stack Mastery course! We are thrilled to have you embark on this transformative journey into the world of full-stack web development. With 200+ hours of live and recorded content, this course is designed to help you gain the skills needed to build modern web applications. You are about to master MongoDB, Express.js, React, and Node.js—all of which will open new doors in your development career.

www.keertikaonline.com



MERN STACK

Table Of Content



01 Welcome Message 

02 About Us 

03 Vision & Mission 

04 MERN STACK Mastery Syllabus 

05 Pricing 



About Us

Keertika Online is an education platform that provides high-quality courses in web development, cybersecurity, private security personnel training, data science, and more. We offer courses in Hindi, Bengali, and English to reach learners across India, empowering them with in-demand skills for today's competitive job market. Our platform includes online, offline, and blended modes of delivery.

www.keertikaonline.com



Vision And Mission

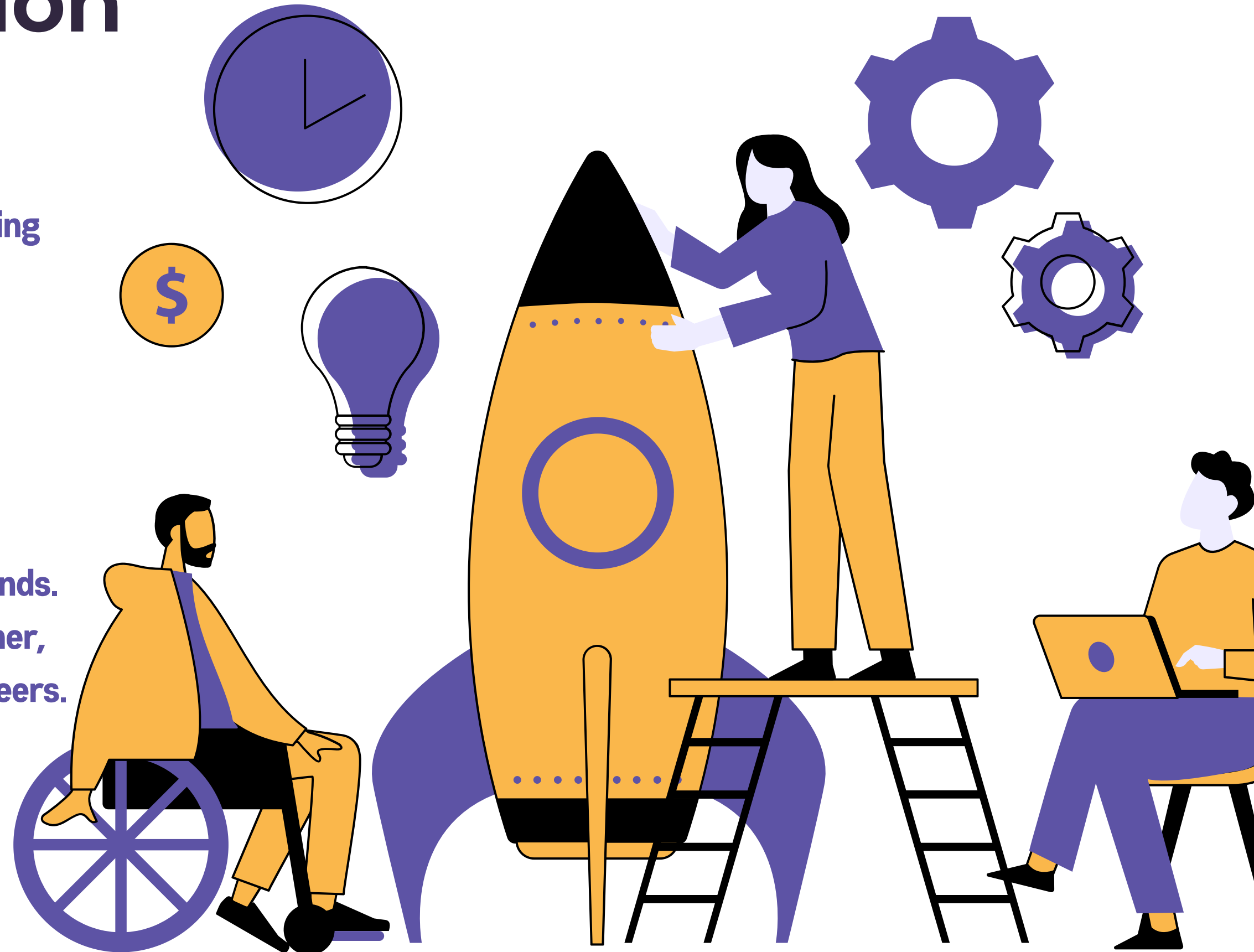
Vision

To become a leading provider of accessible and affordable skill-based education in India, transforming the careers of learners across diverse fields.

Mission

At Keertika Online, our mission is to bridge the gap between education and employment by delivering cutting-edge courses that align with industry demands. We believe in creating opportunities for every learner, ensuring they have the tools to succeed in their careers.

www.keertikaonline.com



Course Syllabus

Total Modules: 03

Each Module Duration: 03 Months

Total Program Duration: 9 Months



Module 1: Advanced JavaScript

Duration: 3 months



Week 1-2: JavaScript Fundamentals Review

- Variables, Data Types, and Operators
- Control Structures (if-else, switch, loops)
- Functions (declaration, expression, arrow functions)
- Scope and Hoisting

Week 3-4: Advanced Functions and Asynchronous Programming

- Higher-Order Functions and Closures
- Callback Functions and Promises
- Async/Await
- Error Handling

Week 5-6: Object-Oriented JavaScript

- Object Literals and Constructors
- Prototypes and Inheritance
- Classes and Modules (ES6)

Week 7-8: JavaScript Design Patterns

- Singleton, Factory, Observer, and Module Patterns
- Revealing Module Pattern
- MVC Pattern



Module 1: Advanced JavaScript

Duration: 3 months



Week 9-10: Advanced Array Methods

- map(), filter(), reduce()
- forEach(), some(), every()
- find(), findIndex(), includes()

Week 11-12: DOM Manipulation and Event Handling

- Selecting and Manipulating DOM Elements
- Event Listeners and Event Delegation
- Form Handling and Validation

Week 13-14: Working with APIs

- Fetch API and Axios
- Handling JSON Data
- RESTful APIs

Week 15-16: Testing and Debugging

- Unit Testing with Jest
- Debugging Techniques and Tools
- Performance Optimization

Module 2: Advanced React JS

Duration: 3 months



Week 13 - 14: React Fundamentals Review

- Components, Props, and State
- JSX and Rendering
- Lifecycle Methods

Week 15 - 16: Advanced State Management

- Context API
- Redux Basics (Actions, Reducers, Store)
- Redux Middleware (Thunk, Saga)

Week 17 - 18: Hooks in Depth

- useState, useEffect
- Custom Hooks
- useContext, useReducer

Week 19 - 20: Routing and Navigation

- React Router DOM
- Nested Routes
- Route Guards and Redirects

Module 2: Advanced React JS

Duration: 3 months



Week 21: Form Handling and Validation

- Controlled and Uncontrolled Components
- Formik and Yup for Form Validation
- Handling Form Submissions

Week 22: Performance Optimization

- React.memo and useMemo
- Lazy Loading and Suspense
- Code Splitting

Week 23: Testing in React

- Unit Testing with Jest and React Testing Library
- Snapshot Testing
- End-to-End Testing with Cypress

Week 24: Advanced Patterns and Techniques

- Higher-Order Components (HOC)
- Render Props Pattern
- Context and Render Props



Module 3: Advanced Express JS and MongoDB



Duration: 3 months

Week 25 - 26: Express Fundamentals Review

- Setting Up an Express Server
- Middleware Functions
- Routing and Route Parameters

Week 27 - 28: Advanced Middleware and Security

- Custom Middleware
- Authentication and Authorization (JWT, OAuth)
- Security Best Practices (Helmet, Rate Limiting)

Week 29 - 30: Building RESTful APIs

- REST Principles
- CRUD Operations
- Versioning and Best Practices

Week 31 - 32: Real-time Applications with Socket.io

- Setting Up Socket.io with Express
- Broadcasting and Rooms
- Real-time Notifications and Chat Applications

Week 33: Working with MongoDB

- MongoDB Basics (Documents, Collections, Databases)
- CRUD Operations with MongoDB
- Indexing and Aggregation

Week 34: Mongoose for Data Modeling

- Mongoose Schemas and Models
- Schema Types and Validation
- Middleware and Hooks

Module 3: Advanced Express JS and MongoDB



Duration: 3 months

Week 35: Advanced Querying and Population

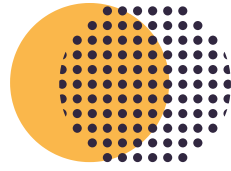
- Advanced Queries in Mongoose
- Data Population and Virtuals
- Transactions and Aggregations

Week 36: Testing and Debugging

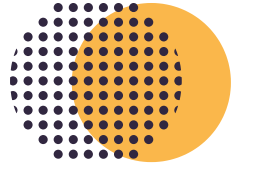
- Unit Testing with Mocha and Chai
- Integration Testing
- Debugging Techniques and Tools

Capstone Project and Presentation

- Building a Full-stack MERN Application
- Presentation and Code Review
- Final Q&A and Wrap-up



Course Schedule



Sun	-----
Mon	-----
Tue	-----
Wed	9 PM to 11 PM
Thu	-----
Fri	-----
Sat	9 PM to 11 PM

Batch Start Date: 28-09-2024 9 PM

Masterclass Date: 21-09-2024 9 PM

25-09-2024 9 PM





Pricing Options



One time fee payment

₹8000

Single Payment

- ✓ Live Classes
- ✓ Class recording
- ✓ CodeGPT premium
- ✓ Certificate
- ✓ Free Job Portal access

[Know More](#)

For 3 months

₹2750

Quarterly

- ✓ Live Classes
- ✓ Class recording
- ✓ CodeGPT premium
- ✓ Certificate
- ✓ Free Job Portal access

[Know More](#)

Monthly

₹1000

Per Month

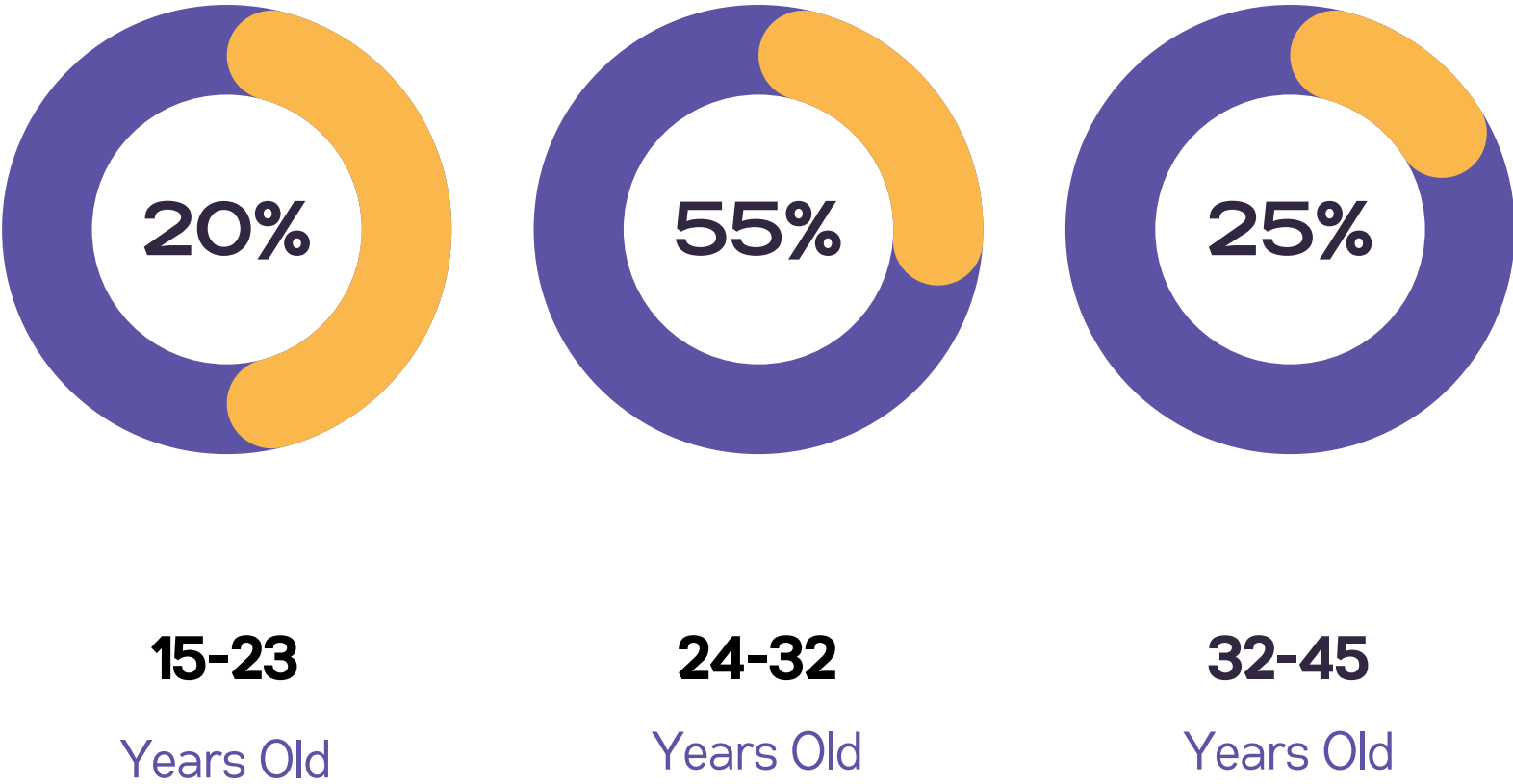
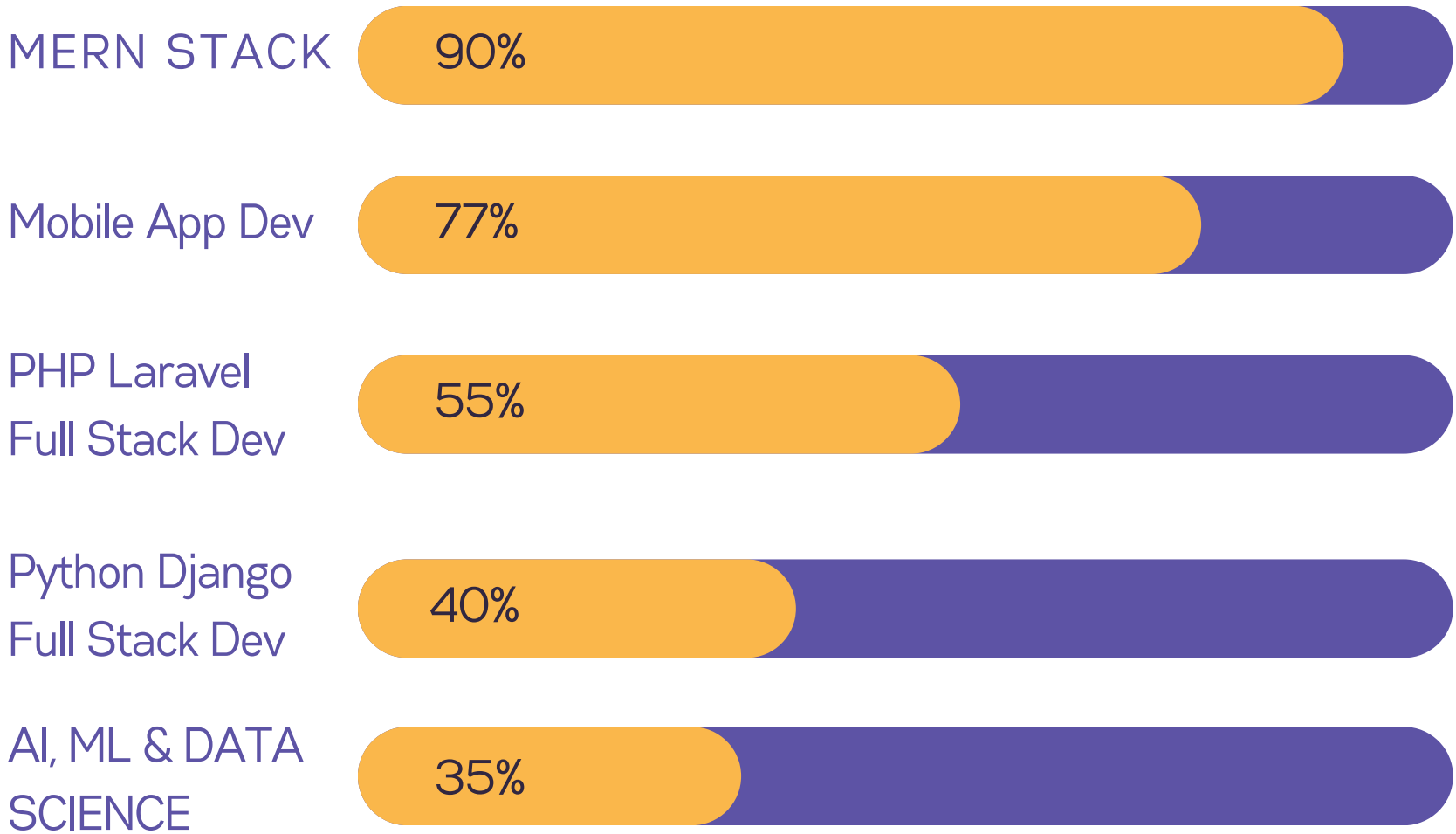
- ✓ Live Classes
- ✓ Class recording
- ✓ CodeGPT premium
- ✓ Certificate
- ✓ Free Job Portal access

[Know More](#)

No Cost & Low Cost EMI options also available on Single Payment checkout

Top 5 Courses

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aliquam feugiat at velit vel ultrices. Curabitur tincidunt id velit ut accumsan. Mauris sit amet neque elementum, suscipit turpis a, dapibus risus. Aenean sit amet pellentesque urna. Morbi tincidunt non enim eleifend lobortis. Nam consectetur justo ipsum, vel vehicula lacus tincidunt vitae.



Try To Explore New Skill





Contact Us



9748281230 / 8584882609



www.keertikaonline.com



support@keertikaonline.com



[@keertikaonline](https://www.instagram.com/keertikaonline)





Enroll Now

www.keertikaonline.com