KRUTANIC
A LADDER FOR BRIGHTER FUTURE
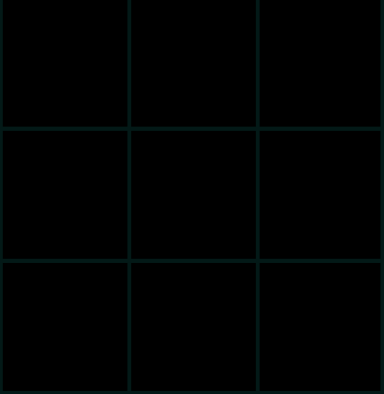
www.krutanic.com

MERN-STACK DEVELOPMENT
ADVANCED PROGRAM

Master the tools and strategies shaping mern-stack development's future in 2025

MERN-STACK DEVELOPMENT

We assume you might have some questions..

∨

Why should I choose krutanic?

Why is Mern-Stack Development a good option?

How will the Mern-Stack Development Program will help you achieve your Dream?

Do you know how many job opening's are worldwide?

What are the Mern-Stack Development tool you need to master ?

Will I get a certificate to enhance my resume?

How should I enroll for this program?

We genuniely care for **your dreams** and be a path for your **success**!

That's why our career focused programs seamlessly combine theory with practices, equipping you with real-world skills for employer's value

Ensuring you're not just ready for the next step but also for the future at large, we offer exclusive modules on leveraging generative AI in your field

Build Portfolio

Learn and perfect your skills - hands on by working on **industry relevant projects** to build a **solid portfolio**

Get Placement Ready

Gain the most In - demand skills to launch **switch, or advance your career** with actionable programs across fields

Community Building

Enjoy the best peer - led learning with tons of events while **networking & building lifelong relationships**

Why is Mern-Stack Development a good career option?

Master the MERN stack to create dynamic web applications with seamless integration of front-end and back-end components.

The global market size for MERN stack development is indirectly tied to the broader web development and software services industry, which is projected to grow significantly. The full-stack development segment (including MERN) is driven by increasing demand for scalable, high-performing web applications and single-page applications (SPAs). While specific data on MERN's market size is not readily isolated, the global web development services market is expected to reach $56 billion by 2030, showcasing rapid growt

The MERN stack, being a JavaScript-based solution, benefits from its open-source nature, scalability, and flexibility, making it a top choice for startups and enterprises looking to build modern web applications. Its adoption in high-demand industries and companies such as Netflix and Uber further underscores its market prominence
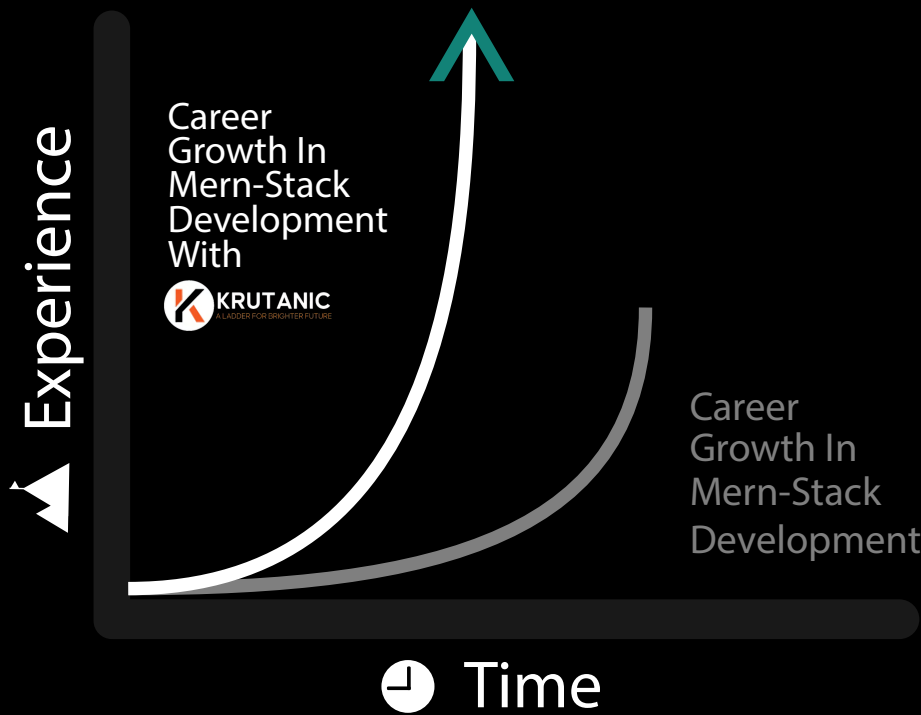
$56 BILLION
Global Mern-Stack Development market by 2030...

#1 MOST IN - DEMAND SKILLS

55000+
Job opening's in India

Experience

Career Growth In Mern-Stack Development With

KRUTANIC
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Career Growth In Mern-Stack Development

Time

How will the **Mern-Stack Development Program** will help you achieve your **Dream**

THEY SAW THEIR CAREERS TRANSFROM & YOU CAN TOO HERE'S HOW?

1
Online Induction
Meet your tribe, participate in fun yet intense challenges and kick-start your transformative journey.

2
Master the concepts of Mern-Stack Development
Build a strong foundation in Mern-Stack Development and learn the strategies used by industry leaders to become a mern-stack developer in 6 months.

3
Build proof of work
Work on industry-relevant assignments, participate in challenging projects to develop a portfolio that showcases your diverse set of skills.

4
Prepare for interviews & land your dream job
Participate in live portfolio review sessions, mock interviews, and get guidance throughout the job application process.

175000+

Job opening's worldwide

Full-Stack Developer

Frontend Developer

Backend Developer

MERN Stack Developer

Web
Application Developer

React Developer

Node.js Developer

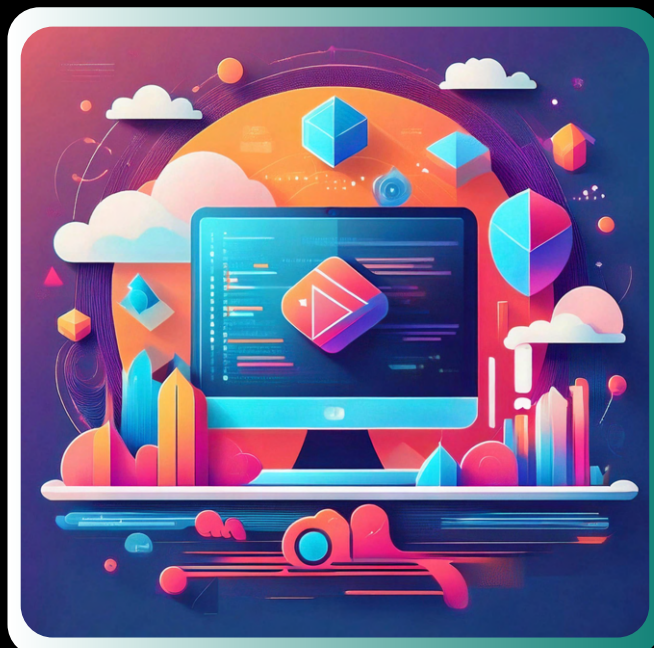JavaScript Developer

Software Engineer
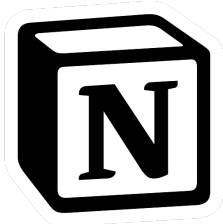
UI/UX Developer

API Developer

DevOps Engineer

Mobile App Developer

Technical Consultant

Freelance
Web Developer

Mern-Stack Development Tools

Weeks 1-2

Introduction to MERN Stack Development

Students will understand the MERN stack architecture and its individual components, enabling them to start building web applications.

✦ Overview of the MERN stack components (MongoDB, Express.js, React, Node.js)

✦ Setting up Node.js and MongoDB development environments

✦ JavaScript ES6+ for asynchronous programming

✦ Introduction to MongoDB databases

LEARNING OUTCOME

Students will be introduced to the MERN stack (MongoDB, Express.js, React, Node.js) and its components. This module covers the basics of web development using JavaScript, understanding the architecture, and setting up the development environment.

Weeks 3-4

MongoDB and Express.js Fundamentals

This module covers database management with MongoDB and building server-side applications using Express.js. It includes practical exercises for setting up databases, performing CRUD operations, and understanding the Express.js framework.

✦ MongoDB schema design

✦ CRUD operations in MongoDB

✦ RESTful APIs with Express.js

✦ Routing and middleware in Express

LEARNING OUTCOME

They will gain hands-on experience in using Express.js for building RESTful APIs, handling routing, and effectively using middleware for request handling

Weeks 5-6
Front-End Development with React

Students will focus on front-end development using React. This module covers the building of interactive user interfaces, managing state with React, and using JSX.

✦ React component lifecycle

✦ State management with React hooks

✦ Building UI components and React Router for navigation

✦ Using React libraries for animation and transitions

LEARNING OUTCOME

Students will build interactive and dynamic user interfaces using React. They will be able to manage state effectively using React hooks and understand component lifecycle methods, allowing for the creation of reusable components and efficient routing within React applications.

Week 7

Advanced Database Management with MongoDB

Students will master setting up and managing a Node.js server and understand asynchronous programming using advanced MongoDB techniques for optimizing queries and data management.

- Advanced MongoDB query techniques (aggregation, indexing, sharding)

- Data modeling and performance tuning

- Real-time data processing with MongoDB change streams

- Backup and restore strategies

- Database security practices

LEARNING OUTCOME

They will understand how to secure databases and ensure performance tuning for complex applications, providing expertise in handling real-time data updates and backups.

Weeks 8-9

Node.js and Express for Backend Development

This module focuses on back-end development using Node.js. Topics include server setup, handling HTTP requests, asynchronous operations, and API development with Express.js.

- ✦ Asynchronous programming in Node.js

- ✦ Creating APIs in Express.js

- ✦ Error handling and file management

- ✦ Using middleware effectively

- ✦ Implementing sessions and cookies

LEARNING OUTCOME

Students will master setting up and managing a Node.js server and understand asynchronous programming.

They will be skilled in building robust RESTful APIs using Express.js and managing user sessions through authentication and cookies, ensuring secure data transmission.

Week 10
Building a Full-Stack Application

Students will integrate front-end React with backend Express to build a full-stack application. The focus is on data flow between the front-end and back-end and deploying the application.

✦ Connecting React with Express

✦ API integration and data flow management

✦ Deployment strategies (Heroku, AWS)

✦ Using axios for HTTP requests

LEARNING OUTCOME

Students will be capable of building and integrating full-stack applications, handling API calls, and setting up deployments on cloud platforms.

They will understand data flow between front-end and back-end components and implement strategies for scaling and monitoring applications in production.

Weeks 11-12
Advanced React

This module covers advanced topics in React, including hooks, context API, custom hooks, and building complex applications.

✦ Use of React hooks and context API

✦ Custom hooks for data fetching

✦ Component composition and performance optimization

✦ Handling complex state management

LEARNING OUTCOME

Students will gain expertise in using React hooks and context API, allowing for better state management and building more complex applications.

They will optimize React components for performance, understanding best practices for handling state across different components.

Weeks 13-14
Building RESTful APIs and Authentication

This module focuses on building secure RESTful APIs and implementing authentication mechanisms using JWT. Students will explore OAuth and secure data handling.

- Secure RESTful API building

- Implementing JWT for authentication

- OAuth integration

- API security best practices

LEARNING OUTCOME

Students will be proficient in building secure APIs using RESTful methods and implementing JWT for authentication.

They will understand OAuth integration and secure data handling, allowing for the development of safe and effective web applications.

Weeks 14-15

Performance Optimization and Debugging

In this module, students will learn to optimize the performance of their applications and use debugging techniques effectively.

- Profiling tools (Chrome DevTools, React DevTools)
- Identifying and resolving performance bottlenecks
- Debugging Node.js and React applications
- Best practices for optimization

LEARNING OUTCOME

Students will be able to use profiling tools to optimize the performance of their applications and effectively debug front-end and back-end issues.

They will develop skills for resolving performance bottlenecks and ensuring efficient, smooth-running applications.

Week 16

Deployment and Scaling

This module covers deployment strategies for MERN applications on cloud platforms like AWS, Heroku, and Firebase. Students will learn CI/CD pipelines and how to scale applications.

- ✦ CI/CD with GitHub Actions or Jenkins

- ✦ Containerization with Docker

- ✦ Deploying to cloud platforms (AWS, Heroku, Firebase)
- ✦ Scaling strategies and monitoring

LEARNING OUTCOME

Students will gain experience in deploying MERN applications using CI/CD pipelines, containerization, and cloud platforms.

They will understand scaling strategies, ensuring their applications can handle larger user bases and performance demands.

Weeks 17-20

Capstone Project

This module allows students to apply what they've learned in a real-world project. It also includes career preparation elements like resume building, mock interviews, and job search strategies.

- ✦ Capstone project development

- ✦ Portfolio building and resume preparation

- ✦ Mock interviews and job search strategies

- ✦ Networking with industry professionals

LEARNING OUTCOME

Students will complete a comprehensive project that demonstrates their MERN stack development skills, creating a strong portfolio for job applications.

Weeks 21-24

Placement Preparation and Career Guidance

Prepare for your career in digital marketing by refining your resume, practicing for interviews, and learning job-search strategies.

- Resume Building and LinkedIn Optimization

- Interview Tips and Mock Interviews

- Job Search Strategies and Networking

- How to Present Your Capstone Project

- Building a Professional Portfolio

LEARNING OUTCOME

Prepare for a successful job search and interviews with a professional portfolio and job-ready skills.They will be prepared for full-stack developer roles, equipped with interview skills, resume-building techniques, and strategies for job placement.

Upon completing the Mern-Stack Development Advanced Program, you'll earn a certificate, highlighting your skills and expertise.

Showcase your new abilities and build a stronger professional portfolio.

CERTIFICATE
OF COMPLETION

KRUTANIC

Proudly presented to

name

*For demonstrating practical knowledge and skills essential for success by successfully completing the **Advanced Program.***

N·S·D·C
National
Skill Development

Srikanth
Shrikant Rathod
Executive Director

All Mern-Stack Development Concepts, Strategies, Assignments, Tools & Community Events At One Affordable Price

71,999+ GST   24 weeks | 60 Seats per cohort

- Access to an Exclusive Community of Top Marketers and Industry Professionals.
- One-Year Access to Comprehensive Course Materials, Including Pre-reads and Training Resources.
- Exclusive Invitations to Physical Events, Networking Meetups, and Workshops.
- Personalized Guidance from Guest Mentors with Experience in Leading Startups.
- Real-World Insights and Strategies to Accelerate Your Marketing Career.

I'm all in! How should I sign up?

READY TO TAKE CHARGE OF YOUR CAREER?

Take you first steps towards a rewarding career in Mern-Stack Development by filling out application form

Fill out the application form

oooo

Application review by experts

oooo

Selected candidate will recive an offer

FINALLY PROGRAM KICK OFF & ONBOARDING

Apply now

Got more question for us? Feel free to reach out to us at www.krutanic.com

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