

12-Week MERN Full-Stack Developer Roadmap

Generated on: May 13, 2025

Weeks 1-2: Core Web + Modern JavaScript

Goals:

- Master HTML/CSS fundamentals
- Understand JavaScript ES6+ deeply

Checklist:

- HTML5: semantic elements, forms, tables, links
- CSS3: Flexbox, Grid, media queries
- JavaScript (ES6+): let/const, arrow functions, template literals, destructuring, promises, async/await, DOM manipulation
- Git basics: clone, commit, push, pull, branch
- Build and style a responsive portfolio or landing page

Weeks 3-4: React Frontend

Goals:

- Learn React from scratch
- Build reusable components
- Consume APIs

Checklist:

- React basics: components, props, state, JSX
- Event handling, forms, conditional rendering

- Lists, keys, hooks (useState, useEffect)
- React Router (react-router-dom)
- Axios or Fetch API for HTTP calls

Mini-Project:

- Movie search app using TMDB API

Weeks 5-6: Backend with Node.js + Express

Goals:

- Build REST APIs
- Connect to MongoDB
- Use Postman to test APIs

Checklist:

- Node.js runtime, npm/yarn
- Express.js setup, routes, middleware
- MongoDB + Mongoose (schema, model, CRUD)
- REST principles (GET, POST, PUT, DELETE)
- Error handling & logging
- CORS, .env configuration

Mini-Project:

- Blog API (Users, Posts, Comments, CRUD endpoints)

Weeks 7-8: Full-Stack Integration

Goals:

- Connect frontend to backend

- Add authentication
- Manage state across app

Checklist:

- React: login/signup forms
- Backend: JWT Auth (register, login, protect routes)
- Use Axios to send auth headers
- Store JWT in localStorage
- Global state with Context API (or Redux optional)

Project:

- Notes/todo app with user login, create/edit/delete tasks

Weeks 9-10: Advanced Features

Goals:

- Add real-world features like image upload, filtering
- Prepare app for deployment

Checklist:

- File upload (Multer + Cloudinary)
- Role-based access control (admin/user)
- Pagination & search filters (backend + frontend)
- Environment variables for deployment
- Prepare README.md for GitHub

Project:

- E-commerce site (products, cart, login, admin dashboard)

Weeks 11-12: Final Project + DevOps

Goals:

- Build and deploy a capstone project
- Learn CI/CD and Docker (optional)

Checklist:

- Choose idea
- Use GitHub repo with branches and PRs
- Write basic tests (Jest, RTL optional)
- Deploy backend (Render/Railway)
- Deploy frontend (Vercel/Netlify)
- Connect custom domain (optional)

Capstone Project Ideas:

- Projectify: A Trello-style project/task manager
- BookNook: Social platform to share & review books
- QuickHire: Job board with employer/admin dashboards
- EventPlanner: Plan and manage events (RSVP, calendars)