

## MERN Roadmap (Node.js + Express + React)

### TOOLS YOU MUST INSTALL FIRST:

- Node.js (Latest LTS)
- VS Code
- Git
- Postman
- MongoDB Compass
- Chrome Browser

### VS CODE EXTENSIONS:

- Prettier
- ES7+ React Snippets
- GitLens
- Tailwind CSS IntelliSense

### JAVASCRIPT BASICS TO LEARN:

- Variables, functions, arrays, objects
- Arrow functions
- Spread operator
- Template literals
- Promises & async/await
- JSON

### BEGINNER PROJECTS (JavaScript Only):

- Calculator
- Todo List
- Weather App

- API Projects

#### NODE.JS ROADMAP:

- Node modules
- FS, Path, Events
- npm usage
- Async programming

#### NODE PROJECTS:

- File Organizer CLI
- Notes Manager
- Student Management CLI

#### EXPRESS.JS ROADMAP:

- Servers, routing, middleware
- MVC pattern
- Query & params
- REST APIs

#### EXPRESS PROJECTS:

- Todo API
- Blog API
- URL Shortener
- Authentication API

#### MONGODB ROADMAP:

- CRUD
- Mongoose
- Relations

- Aggregations

#### REACT ROADMAP:

- JSX
- Components & props
- useState, useEffect
- Router
- Context API
- Custom Hooks

#### REACT PROJECTS:

- Todo App
- Weather App
- Movie Search App

#### FULL-STACK (MERN) PROJECTS:

- Todo (Full Stack)
- Notes App
- Blog App
- Authentication System
- E-commerce MERN App

#### 90-DAY STUDY PLAN:

Month 1: JavaScript + Node

Month 2: Express + MongoDB

Month 3: React + Full Stack Integration