

# **Full Stack Web Development Roadmap**

**By Sagar(sagar\_mee\_)**

## **1) Foundations**

### **a) HTML & CSS Fundamentals**

**Topics :**

- Semantic HTML5
- CSS layout (Flexbox, Grid)

**YouTube Channels:**

- Apna College
- Bro Code

### **b) JavaScript Fundamentals**

**Topics to Master:**

- DOM manipulation
- Async programming
- Promises
- Fetch API
- Async/Await
- Error handling

**YouTube Channels:**

- Apna College
- FreeCodeCamp

## **2) Frontend Development**

### **a) React with Vite**

**React Learning Path:**

- Component architecture
- Functional components

- Hooks (useState, useEffect, useContext)
- Custom hooks
- React Router
- Form handling
- Component lifecycle

**YouTube Channel:**

- Complete Coding by Prashant Sir

## **b) State Management with Redux**

**Topics:**

- Redux core concepts
- Redux Toolkit
- Async actions with Redux Thunk
- Connecting Redux to React

**YouTube Channels:**

- Complete Coding by Prashant Sir
- Redux Official Channel

## **c) Styling with Tailwind CSS**

**Learning:**

- Utility-first approach
- Responsive design
- Custom configurations
- Dark mode implementation

**YouTube Channels:**

- Tailwind CSS Official
- Web Dev Simplified

# **3) Backend Development**

## **a) Node.js with Express.js**

**Backend Learning Path:**

- Node.js core concepts

- Express.js routing
- Middleware implementation
- Authentication (JWT)
- Error handling
- Validation
- Security best practices

**YouTube Channels:**

- FreeCodeCamp
- Complete Coding by Prashant Sir

## **b) MongoDB Integration**

**Topics:**

- Mongoose ODM
- Schema design
- CRUD operations
- Aggregation
- Indexing
- Relationship modeling

**YouTube Channels:**

- Complete Coding by Prashant Sir
- MongoDB Official

## **4) Advanced Topics**

### **a) Authentication**

**Focus Areas:**

- JWT authentication
- OAuth
- Role-based access control
- Secure password storage
- Token management

**YouTube Channels:**

- FreeCodeCamp
- Traversy Media

## **b) API Development**

### **Topics:**

- RESTful API design
- GraphQL basics
- API documentation (Swagger)
- Postman for API testing
- Rate limiting
- Error handling

### **YouTube Channels:**

- Traversy Media
- The Net Ninja
- Academind

## **5) DevOps and Deployment**

### **a) Version Control**

#### **Learning:**

- Git fundamentals
- GitHub workflow
- Branch management
- Pull requests

#### **YouTube Channels:**

- FreeCodeCamp
- Traversy Media

### **b) Deployment**

#### **Platforms to Learn:**

- Netlify
- Vercel
- AWS (EC2, S3)
- Heroku

#### **YouTube Channels:**

- Traversy Media

- Fireship
- AWS Official

## **6) Additional Skills**

### **a) Testing**

#### **Topics:**

- Jest for unit testing
- React Testing Library
- Cypress for E2E testing

#### **YouTube Channels:**

- Academind
- Traversy Media

### **b) Performance Optimization**

#### **Focus:**

- Code splitting
- Lazy loading
- Memoization
- Performance profiling

#### **YouTube Channels:**

- Web Dev Simplified
- Fireship

## **7) Project Development Strategy**

### **a) Project Types to Build**

1. Personal Portfolio
2. Task Management App
3. E-commerce Platform
4. Social Media Clone
5. Real-time Chat Application

## 8) Recommended Complete YouTube Playlists

1. **Traversy Media Full Stack Playlist**
  - Comprehensive MERN stack tutorial
  - Project-based learning
2. **FreeCodeCamp Full Stack Courses**
  - Extensive, free learning resources
  - Multiple project implementations
3. **The Net Ninja MERN Stack Playlist**
  - Detailed, step-by-step tutorials
  - Clean, understandable explanations

## 9) Recommended Learning Sequence

1. HTML, CSS, JavaScript fundamentals
2. React with Vite
3. State management (Redux)
4. Node.js and Express.js
5. MongoDB integration
6. Authentication
7. Deployment
8. Continuous learning and project building

**Maze Karo , Enjoy Learning**