

Web development

Roadmap

1. Basics of Web Development

Before diving deep, understand how the web works

- What is Internet, Domain, Hosting, Client–Server
 - How a Website loads (HTTP, HTTPS)
 - Basics of Frontend vs Backend
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2. Frontend Development (Client-Side)

This is what users see on the browser.

Step 1: Core Web Fundamentals

- HTML5 → structure of a webpage
- CSS3 → styling (Flexbox, Grid, Animations)
- JavaScript (ES6+) → logic & interactivity

Step 2: Advanced Frontend

- Responsive Design (Media Queries, Mobile-first)
- CSS Frameworks → Tailwind CSS / Bootstrap
- Version Control → Git & GitHub

Step 3: Modern Frontend Frameworks

- React.js (most popular, in demand 2025)
or Next.js (for server-side rendering & SEO)
- Optional Alternatives: Vue.js or Angular

Step 4: Frontend Tools

- Package Managers → npm, yarn
 - Bundlers → Vite, Webpack
 - API Handling → Fetch, Axios
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3. Backend Development (Server-Side)

This handles data, logic, and security.

Step 1: Choose a Backend Language

- Node.js (JavaScript) — best for full-stack JS
- OR Python (Django / Flask)
- OR PHP (Laravel)
- OR Java (Spring Boot)

Step 2: Databases

- SQL (MySQL, PostgreSQL)
- NoSQL (MongoDB)

Step 3: APIs

- RESTful APIs
- GraphQL (optional, advanced)

Step 4: Authentication & Security

- JWT / OAuth
 - Password hashing, HTTPS
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4. DevOps & Deployment

- Web Servers → Nginx / Apache

- Hosting → Vercel, Netlify, Render, AWS, DigitalOcean
 - CI/CD basics (GitHub Actions)
 - Docker (optional but powerful)
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5. Full Stack Development

Combine Frontend + Backend

- Learn Next.js (React Full Stack Framework)
 - OR MERN Stack (MongoDB, Express, React, Node)
 - OR MEAN Stack (Angular instead of React)
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6. Advanced Topics

- TypeScript
 - WebSockets / Real-time apps (Socket.io)
 - Testing → Jest, Cypress
 - Performance Optimization
 - SEO, Accessibility
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7. Projects to Build

-  Portfolio Website
 -  Blog / CMS
 -  E-commerce Website
 -  Chat App
 -  API Server
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8. Career Preparation

- Create a GitHub Portfolio
- Host your projects online
- Learn about Freelancing & Job Portals
- Practice DSA + System Design (for interviews)

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