

Full Stack Developer Roadmap (6-8 Months Plan)

Month 1: Web Basics & Version Control

Goal: Understand how the web works + learn HTML, CSS, Git

Topics:

- How websites work (client-server model, HTTP)
- HTML5 (forms, tables, media)
- CSS3 (selectors, box model, flexbox, grid)
- Git & GitHub (clone, commit, push, branches)

Projects:

- Personal portfolio page
- Simple blog layout

Resources:

- <https://developer.mozilla.org/en-US/docs/Learn>
- <https://www.freecodecamp.org/learn>
- <https://learngitbranching.js.org/>

Month 2: JavaScript Essentials

Goal: Gain strong JavaScript fundamentals

Topics:

- Variables, loops, functions, arrays, objects
- DOM Manipulation
- Event Handling
- ES6+ features (arrow functions, spread, destructuring)

Projects:

- Calculator

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- To-do List
- Weather App (API)

Resources:

- <https://javascript.info/>
- <https://eloquentjavascript.net/>
- <https://www.freecodecamp.org/learn/javascript-algorithms-and-data-structures/>

Month 3: Frontend Framework (React.js)

Goal: Learn component-based development

Topics:

- JSX, Props, State, Events
- useEffect, useState, Routing
- Conditional Rendering, Lists, Forms
- Context API & basic Redux

Projects:

- Blog frontend
- Expense Tracker
- Recipe Finder (API)

Resources:

- <https://reactjs.org/docs/getting-started.html>
- <https://beta.reactjs.org/learn>
- <https://www.freecodecamp.org/learn/front-end-development-libraries/>

Month 4: Backend Development (Node.js + Express.js)

Goal: Learn to build APIs and backend services

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Topics:

- Node.js basics (fs, path, modules)
- Express.js (routes, middleware)
- RESTful APIs (CRUD operations)
- JSON, Postman

Projects:

- Task Manager API
- Notes API

Resources:

- <https://nodejs.dev/en/learn/>
- <https://expressjs.com/>
- <https://www.freecodecamp.org/learn/back-end-development-and-apis/>

Month 5: Databases & Authentication

Goal: Connect frontend + backend with database

Topics:

- MongoDB (Mongoose, schemas, models)
- SQL (PostgreSQL basics - optional)
- JWT & Cookie-based Authentication
- Role-based access, error handling

Projects:

- Full-stack Auth System
- Blog with login/logout

Resources:

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- <https://www.mongodb.com/docs/manual/>
- <https://mongoosejs.com/docs/guide.html>
- <https://www.digitalocean.com/community/tutorials/nodejs-jwt-expressjs>

Month 6: Deployment, Testing & Real Projects

Goal: Learn to deploy and manage real-world apps

Topics:

- Hosting (Render, Vercel, Netlify)
- CI/CD basics
- Basic testing (Jest, Postman tests)
- Security (rate limiting, helmet, CORS)

Projects:

- E-commerce site
- Chat App
- Job Portal

Resources:

- <https://vercel.com/docs>
- <https://render.com/docs>
- <https://jestjs.io/>

Optional (Months 7-8): Advanced Topics

Topics:

- TypeScript
- Next.js (SSR, static gen)
- WebSockets (real-time apps)
- Docker & GitHub Actions (DevOps basics)

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Resources:

- <https://www.typescriptlang.org/docs/>
- <https://nextjs.org/learn>
- <https://socket.io/docs/v4/>
- <https://docs.docker.com/get-started/>
- <https://docs.github.com/en/actions>