DDT _ Data Dose Tech

Front End Content

🌐 **Stage 1: Web Fundamentals (HTML & CSS)**

📄 **1. Advanced HTML5**

- 🧱 Semantic HTML (<header>, <nav>, <article>, <section>)
- 📝 Forms (data input, validation using HTML5 attributes)
- 🎥 Multimedia (video, audio, Canvas API)
- 🔍 SEO Basics (using meta tags, structured data)

🎨 **2. Advanced CSS3**

- 📐 Flexbox & Grid Layout (building complex layouts)
- 🎞️ Animations & Transitions (keyframes, transformations)
- 📱 Responsive Design (mobile-first, media queries, viewport units)
- 🧩 CSS Architectures (BEM, SMACSS)
- 🧶 Preprocessors (SASS/SCSS)

🛠️ **3. Frontend Developer Tools**

- 💻 VS Code + Extensions (Emmet, Live Server)
- 🔎 Chrome DevTools (debugging, performance analysis)
- ⚙️ Build Tools (Parcel, Vite)

💻 **Stage 2: JavaScript (From Basics to Advanced)**

🧠 **1. JavaScript ES6+**

- 📦 **Variables (let, const), Arrow Functions**
- 📊 **Arrays & Objects (destructuring, spread operator)**
- 🔧 **DOM Manipulation (query selectors, event listeners)**
- ⏳ **Async JS (callbacks, promises, async/await, Fetch API)**

🧩 **2. Advanced JavaScript**

- 📁 **ES6 Modules (import/export)**
- 🧠 **Design Patterns (Module, Singleton, Observer)**
- 🛑 **Error Handling (try/catch, custom errors)**
- 🌐 **Web APIs (LocalStorage, Geolocation, Fetch)**

📜 **3. TypeScript** *(Optional for large-scale projects)*

- 🧱 **Types, Interfaces, Generics**
- ⚛️ **Integration with React**

⚛️ **Stage 3: React.js (From Zero to Pro)**

🧰 **1. React Basics**

- 🧩 **Components (functional, class)**
- 🔄 **State & Props (useState, useEffect)**
- 🧭 **React Router (SPA navigation)**
- ✍️ **Forms (controlled components, Formik)**

🚀 **2. Advanced React**

- 🌐 **Context API + useContext**
- 🔧 **State Management (Redux Toolkit / Zustand)**
- 🪝 **Custom Hooks**
- ⚡ **Performance Optimization (React.memo, useCallback)**

🛠️ 3. Practical Projects

- ☑️ Todo App (state management)
- 🛒 E-commerce Frontend (API integration)
- 📊 Dashboard with Charts (React + D3.js)

🧰 Stage 4: Essential Tools & Add-ons

- 🧪 Testing: Jest + React Testing Library
- 🎨 Styling: CSS Modules, Styled-Components, Tailwind CSS
- 🚀 Deployment: Vercel, Netlify, GitHub Pages

📚 Resources

- *Eloquent JavaScript, MDN Web Docs ،freeCodeCamp ، Traversy Media*