Completing my Portfolio

The tech stack being used is as follows:

**🌟 Varun's Portfolio Tech Stack (2025)**

**🖼️ Frontend**

| **Tech** | **Purpose** |
| --- | --- |
| **React** | Core UI framework (component-based, powerful, flexible) |
| **Vite** | Super-fast build tool and dev server (replaces Create React App) |
| **Tailwind CSS** | Utility-first CSS framework (no need to write manual CSS) |
| **Framer Motion** | Animation library for smooth transitions, scroll/hover effects |
| **Spline** | Embeddable 3D objects and interactive visuals |
| **Heroicons / Lucide** | Modern, open-source icon sets for buttons and UI elements |
| **JSX + ES6** | The language you’ll write everything in (JavaScript + XML style markup) |

**🧠 Content Management**

| **Option** | **Purpose** |
| --- | --- |
| **Static JS/JSON files** | Project list, skills, experience (easy, local, fast) |
| *(Later)* **Sanity / Contentful** | Headless CMS to edit content without code |
| *(Optional)* **MDX** | If you want blog posts or long-form content with embedded components |

**🪄 Interactivity / Animations**

| **Tool** | **Purpose** |
| --- | --- |
| **Framer Motion** | Animate page transitions, cards, hover effects, reveals |
| **Spline** | Drag-n-drop 3D editor; export as React components or <iframe> |
| **React State / Props** | Control interactivity, animations, and UI states |

**🌐 Backend (Optional)**

If you later want form submissions, authentication, or dynamic content:

| **Tool** | **Purpose** |
| --- | --- |
| **Node.js + Express** | Backend server with API endpoints |
| **Supabase / Firebase** | Authentication + Realtime DB (no backend code needed) |
| **Formspree / EmailJS** | Serverless contact form handling |
| **Airtable / Notion API** | Low-code, spreadsheet-style backend for content or testimonials |

**🚀 Deployment**

| **Platform** | **Features** |
| --- | --- |
| **Vercel** | Seamless deployment from GitHub, optimized for React + Vite |
| *(Alt)* Netlify | Great for JAMstack, also works well with Tailwind |
| **Custom Domain** | Buy from Namecheap/Google Domains and link to Vercel in 2 clicks |

**🔧 Tooling & Dev Setup**

| **Tool** | **Role** |
| --- | --- |
| **Node.js** | Runtime that powers npm, dev server, and build tools |
| **npm** | Package manager to install Tailwind, React, Framer Motion, etc. |
| **Git + GitHub Desktop** | Version control and online repo hosting |
| **.gitignore** | Keeps build files and secrets out of GitHub |
| **VS Code** | Recommended editor (with Tailwind and React plugins) |

**📝 License**

| **Choice** | **Why** |
| --- | --- |
| **MIT License** | Allows others to view/learn from your code, with credit |
| *(Optional)* No License | If you want to keep it all-rights-reserved (not recommended) |

**Steps:**

1. Create a local Git repository using GitHub Desktop, and add Node to the *.gitignore* file. In addition to this, I selected the MIT License to protect my work, while also allowing others to learn from it.
2. Initialized Vite and React with the following statement:
   1. npm create vite@latest . -- --template react
   2. npm install
   3. npm run dev (to run code locally)
3. Installing Tailwind CSS:
   1. <https://tailwindcss.com/docs/installation/using-vite>
   2. Have your plugins like this in the vite.config.js:
   3. A screen shot of a computer code

      AI-generated content may be incorrect.
   4. Make sure it runs npm run dev with no issues
   5. Install framer motion with npm install framer-motion
4. Adding a not found page, and home page, import BrowserRouter, Route, and Routes, this will allow you to jump from page to page: [React Demo 1](https://www.youtube.com/watch?v=ifOJ0R5UQOc&t=3390s&ab_channel=PedroTech)
   1. To add the spline model, simply copy the embed public link from spline and add the iframe to the div, but add the class name className="w-screen h-screen overflow-hidden" to the div and className="w-full h-full" allowFullScreen settings to the iframe to ensure the full page is taken up
5. In components create a .jsx file “Navbar” which will feature the navigation or jump bar for the portfolio website.