WEB DEVELOPMENT METHODS PROJECT DOCUMENTATION

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PROJECT TITLE: Resume Portfolio

CONCEPT:

My project, which is Resume Portfolio, is developed using Next.js, leveraging its capabilities for fast, and scalable web applications. This site will feature a multifaceted structure with several key pages: Home (with recent projects from GitHub), About, Experience, Education, Projects, and Contact. Each page is designed to showcase different aspects of my professional and academic journey, with an emphasis on clean design, engagement, and interactivity. It will have a block to display any new projects or developments in my career and a form to contact.

DIFFERENTIATION FROM TUTORIALS:

In the tutorials given, it has only the sign in page, add posts page and a posts page. But in my project, I am trying to implement a profile blog, which is like resume blogs. It also has an additional block for retrieving recent projects from GitHub using API and authorization token and a form in contact page which sends the form data to mail. This blog can also add weight to one's resume while searching for jobs.

TECHNOLOGY OVERVIEW:

For this, I chose Next.js. Next.js is a React framework that enables server-side rendering and generates static websites for React based web applications. It is known for its excellent user experience and performance enhancements.

DEVELOPMENT PROCESS:

The project was initiated by setting up a basic Next.js environment. This involved configuring Babel and Webpack to support JSX and modern JavaScript features. I also use tailwindCSS and postCSS for styling. I also use expressJS for server functionalities.

The development process was iterative, starting with a basic layout and incrementally adding features. Each page was developed in a separate phase.

TECHNOLOGIES/MODULES USED:

- NextJS
- react
- ExpressJS
- react-dom
- react-rough-notation
- body-parser
- postcss
- tailwindcss
- autoprefixer
- Axios
- Cors
- next-themes
- nodemailer

KEY FUNCTIONALITIES:

Main Page:

The portfolio is centrally displayed in the Next application through the **Main** component. Designed for larger screens, this component has a two-column style that balances textual content and interactive components. It includes a photograph of me and a fun "That's me" arrow in the center. The component uses responsive design concepts to ensure that it looks neat and professional across a range of device sizes, from desktops to mobiles.
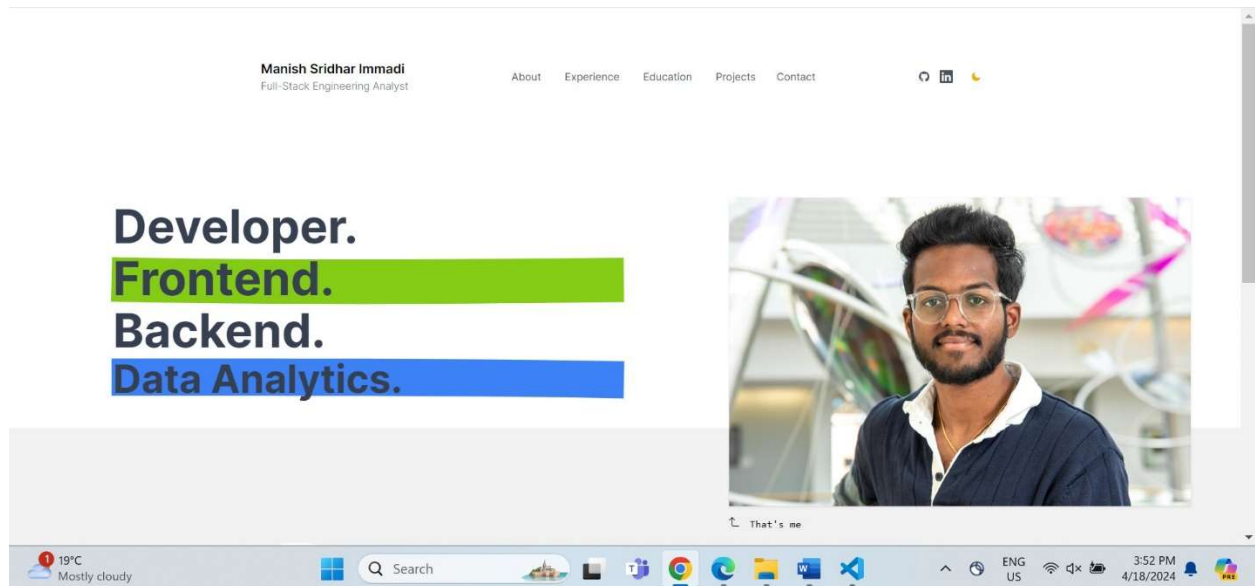

The **RecentProjects** component displays my latest GitHub projects in a responsive grid format, emphasizing simplicity and usability. The design adapts to various screen sizes, ensuring a consistent and accessible user experience. Interactive elements, such as a GitHub profile link, are styled with visual effects to encourage user engagement, maintaining a clean and professional aesthetic throughout. I used an axios API and GitHub authorization token to fetch my projects from GitHub for server-side rendering.
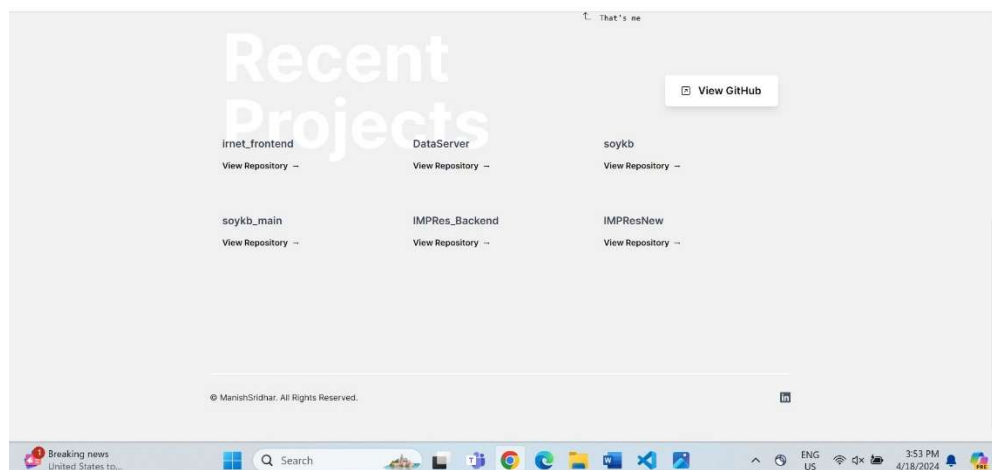
About Page:

The **AboutMe** component functions as a personal bio section, providing a thorough overview of my experience and training. It has a big, eye-catching "About Me" header that changes between bright and dark mode in the middle of the section. I am described as a passionate software developer and data analyst in the narrative text below, which is marked with distinct red tags. Contact data, employment availability information, and social media profile links are included in additional areas to facilitate communication with possible employers or partners. The component also improves my business presentation by showcasing noteworthy accomplishments and a dynamic list of technical talents.
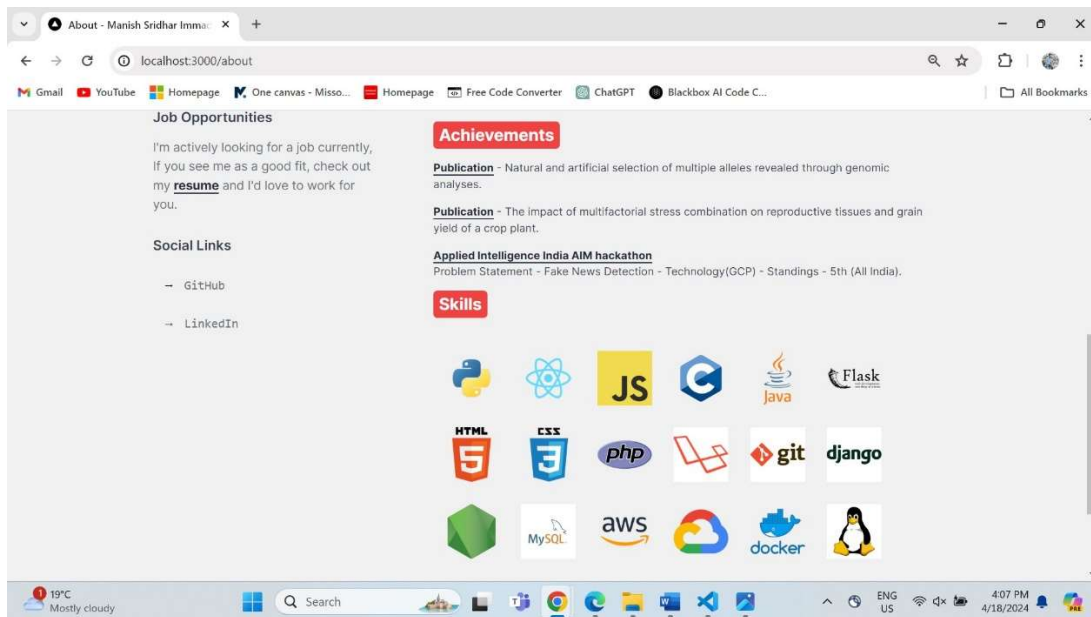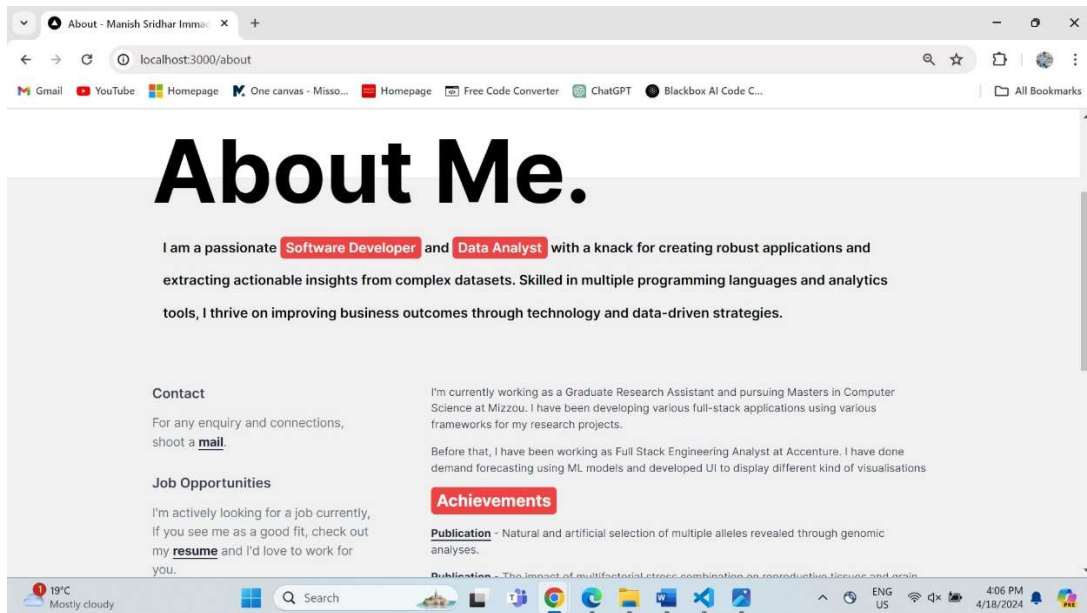
Experience and Education Pages:

      The **Education** and **Experience** components share a consistent styling and layout, each displaying my personal milestones in a clear and engaging format. Below the header, individual cards are dynamically populated with relevant data—schooling details or professional experiences highlighted through interactive visual elements like timelines and icons that enhance readability. Each card includes key details such as institutions, degrees, job titles, and durations, formatted for clarity and easy scanning. These sections are designed to effectively communicate my educational background and professional trajectory in a visually appealing and organized manner.
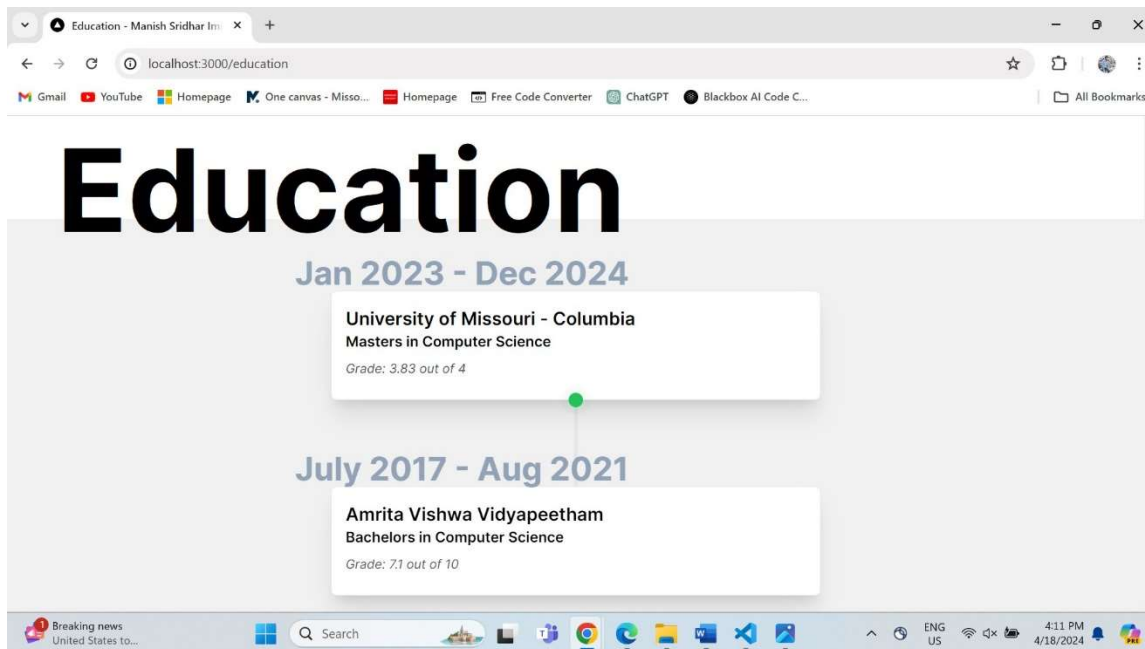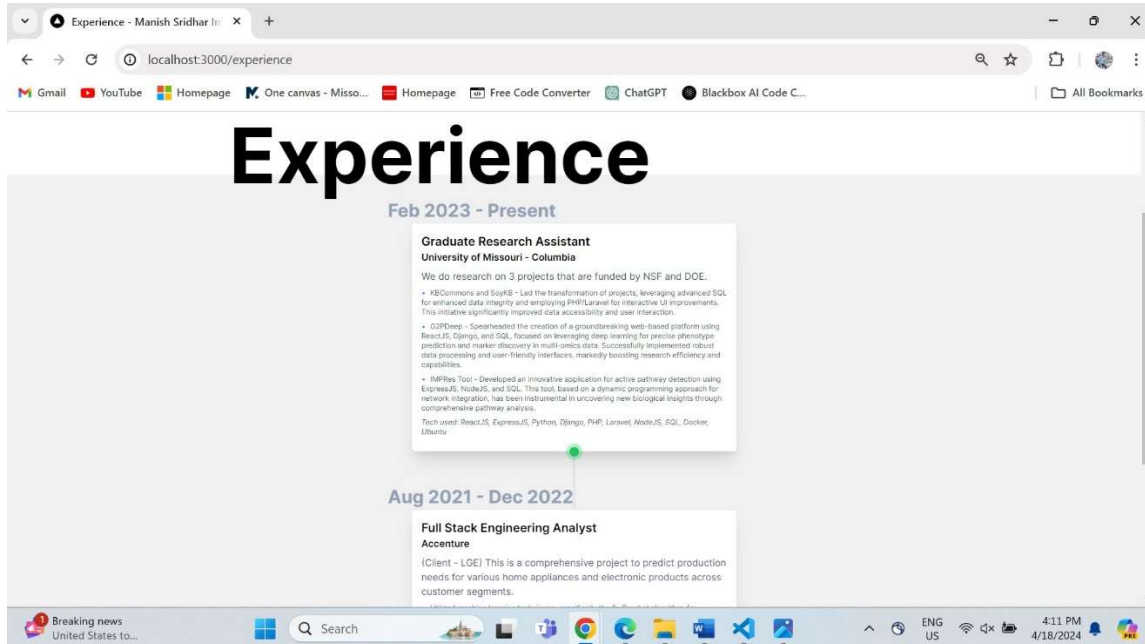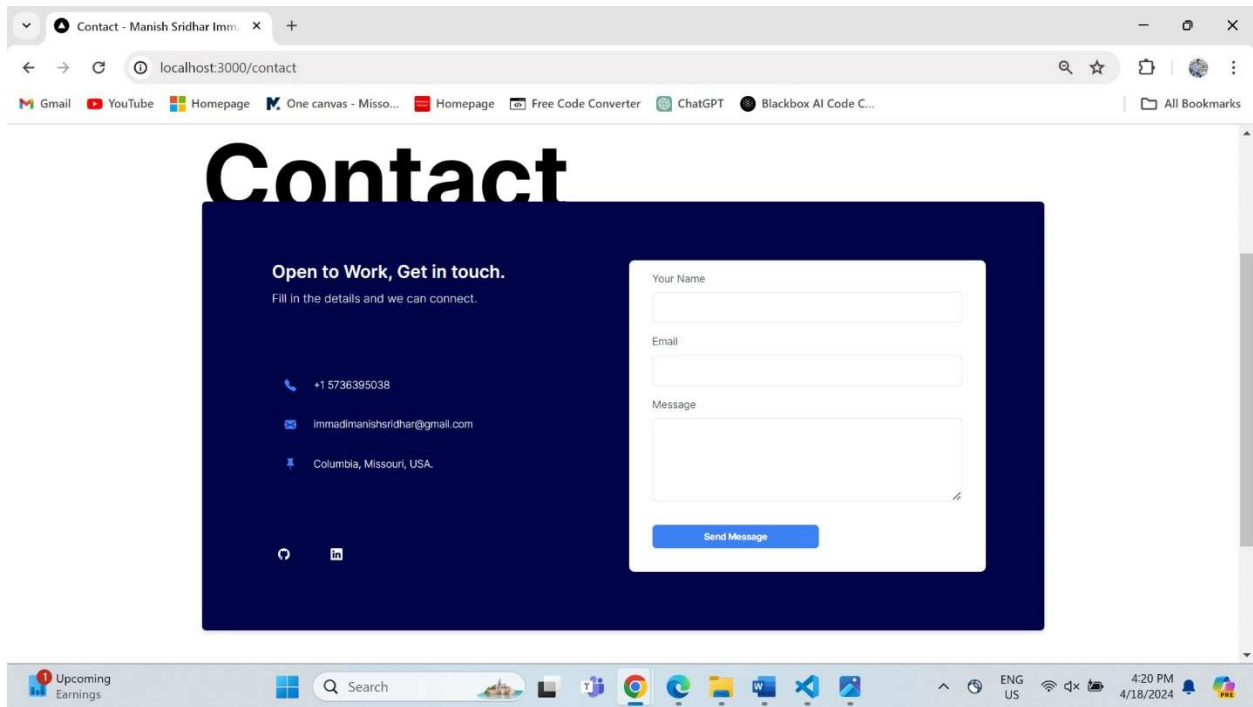
Projects Page:

The **Projects** component displays my body of work as a series of dynamically populated project cards. Each card has a clear title and a succinct description against a striking background. The project's sequence number gives the presentation a special touch. This section efficiently highlights each project within a disciplined grid arrangement with a clean, modern aesthetic that makes use of contrasting colors to enhance readability and visual appeal.
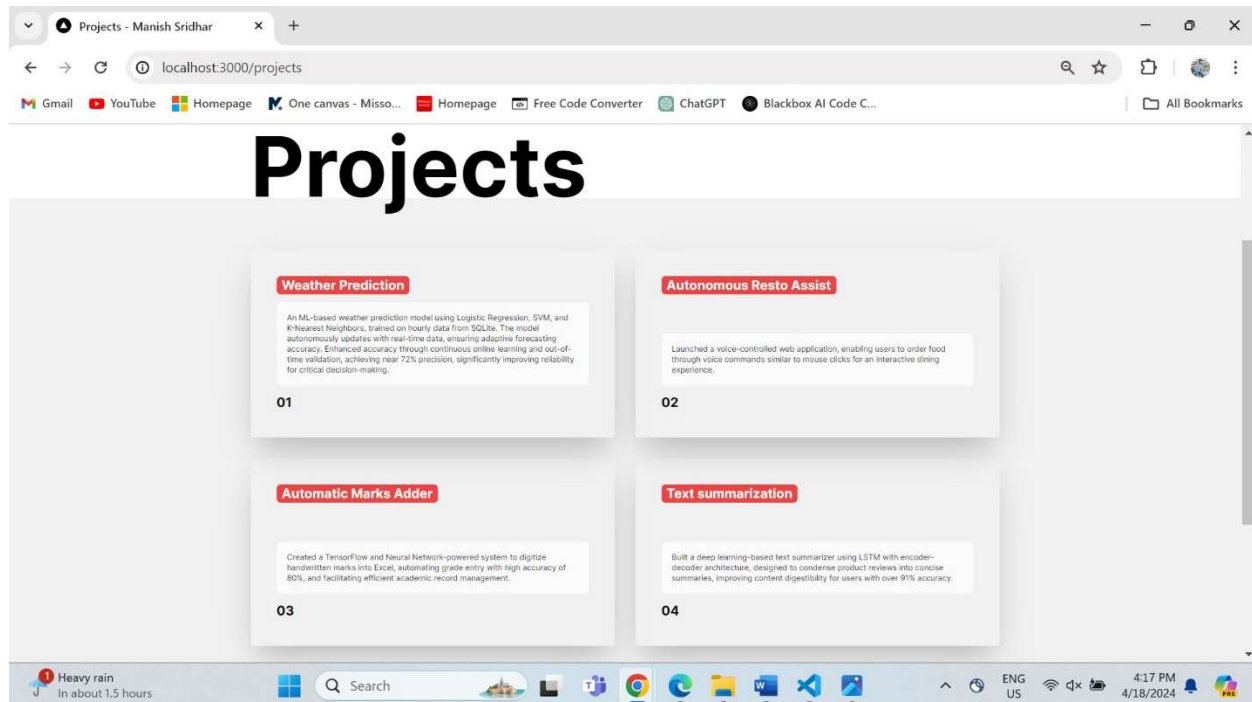
Contact Page:

The **Contact** component facilitates user interaction through a detailed contact form, embedded within a section that combines aesthetic appeal and functionality. It includes fields for name, email, and message, allowing visitors to easily reach out to me. This component also visually highlights contact information like phone and email with interactive icons, and links to social media profiles, promoting connectivity and engagement.

The **server.js** file is configured to handle server-side operations for form data using Node.js with Express. It utilizes middleware such as body-parser for parsing incoming request bodies and CORS for enabling cross-origin requests. The server is set up to send emails using nodemailer upon form submission, demonstrating a practical implementation of server-side logic in a Node.js environment. This setup is crucial for processing contact form submissions securely and efficiently.

NavBar:

The **Navbar** component acts as a navigational header, offering links to different sections of the website like About, Experience, Education, Projects, and Contact. It supports dynamic highlighting based on the current page and integrates a theme toggle switch for light and dark modes, making it highly interactive and adaptable to user preferences.

Footer:

The **Footer** component displays a minimalistic yet effective design with copyright information and social media links. It offers a simple, clean layout that complements the overall aesthetic of the website, enhancing the user experience by providing quick access to my professional networks.

CHALLENGES AND SOLUTION:

I found it difficult to integrate asynchronous data for retrieving GitHub repos. My GitHub token is open in my repository. Then I created an environment variable for GitHub token and accessed it from there which solved my problem.

User form data in the Contact component is not getting rendered due to some issue. Later, I found out it is due to CORS policy error for server side rendering with expressJS. Then I included CORS module and fixed it.

CONCLUSION:

This portfolio project successfully combines Next.js with innovative web technologies to create a unique and functional web presence. It serves as a robust platform for showcasing web development projects and skills. It also does server-side rendering using expressJS and axios modules.

Notable Learnings and Insights: A great deal of knowledge was acquired integrating various technologies, and managing asynchronous data. The project placed a strong emphasis on the value of user-centered design.

Future Improvements: It could include integrating a more robust backend, using AI to improve user interaction, and expanding the content management system for greater control over content updates.