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CS 224G Reflection: Insights on Building Diligence Dynamics

Taking the CS 224G class as a freshman was initially overwhelming for me. The pace was fast, and it seemed like everyone else had a clear idea of what they were doing. Amid this, I became part of a team with four coterm/masters students to work on a project called Diligence Dynamics, which proved to be both challenging and a great learning experience.

Diligence Dynamics was about creating a suite of financial tools for investors using Large Language Models (LLMs). We dove into various technologies like React Bootstrap, Firebase, Next.js, Flask, and Pinecone, which was a lot to take in at first. Gradually, though, we managed to make sense of these tools and how to integrate them into a functioning app. This project taught me how to build a styled frontend, set up a server, manage a database, and establish API connections—a whole suite of useful skills. Particularly, I got hands-on experience with Bootstrap and Firebase, broadened my skills in Next.js and Flask, and for the first time, worked with a RAG pipeline using Pinecone. The project had two main parts I delved into deeply.

For frontend, I worked on styling the sidebar, creating responsive content, and got a good grasp of how Next.js routing works. I also learned to use React hooks like useState and useEffect more effectively, moving away from relying too much on AI-generated code. As for backend, my contributions involved AI sentiment analysis, scraping data from Reddit and news articles, and integrating these functionalities through a Flask API to connect with the frontend. Debugging API endpoints and ensuring smooth communication between frontend and backend were key challenges I tackled and learned about in the process.

The project wasn't just a coding exercise; it underscored the importance of proper planning and design. Looking back, I see that more time spent on structuring the project and understanding system design at a high level from the start would have smoothed out many of the hurdles we encountered. Completing Diligence Dynamics was immensely rewarding. From starting out feeling unsure to ending with a product we were all proud of, the journey was full of learning. The project wasn't just about building an app; it was about creating something meaningful with a team that was just as committed as I was. The teamwork and the fast pace of the class pushed us all to do our best.

Reflecting on this experience, my advice to anyone facing a similar project or class would be to embrace it. The chaos seems daunting at first, but the learning, experience, and connections you gain are invaluable. Moreover, I think the mix of theory and practical application, the quick learning curve, and the chance to work with diverse technologies and people offer a rich, rewarding experience. You might just end up building something you're truly proud of.