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Through our senior design project, we hope to create an application that can be used to backtest strategies. The goal is to design a tool that lets users test trading and investment ideas with historical data so they can understand how those strategies might perform before applying them in real markets. As a Computer Science major with a Finance minor, I see this project connects my two passions. It allows me to apply my passion for technology to solve problems in another industry. On the side note having a huge passion for finance, I am also looking forward to using it myself.

The courses I have taken at the University of Cincinnati have prepared me to take on this project are data structures which trained me to think about efficiency and performance. CS 4033 provided me with exposure to methods that could make back testing strategies more powerful. CS 5127 (Requirements Engineering) helped me understand how to gather and manage user requirements to make sure the platform meets practical needs. Finally, CS 5168 (Parallel Computing) and EECE 5132 (Software Testing & Quality Assurance) gave me the skills to improve system speed and ensure reliability through structured testing. These courses gave me both the technical and problem-solving mindset needed for this project.

My internship experience as an IT Audit Intern at Fidelity also prepared me with practical skills. At Fidelity, I developed Python scripts to automate compliance and testing tasks, which strengthened my coding and problem-solving abilities. I also learned about risk management and how to explain technical work clearly to people from non-technical backgrounds. These skills will be directly useful as we build a system that must be easy to understand. Working with Jash, who also interned at Fidelity, adds even more strength to our project because we both bring experience in finance and technology, as well as familiarity with teamwork in a professional setting.

I am passionate about this project because it combines my passion for computer science and finance, I am excited about the chance to design a system that could help traders. Building a tool that goes beyond academics and could be used by traders and people like me is very intresting to me. I am also looking forward to working with Jash, who shares similar interests/passion. Working with him I hope to learn to grow not just as a professional but individual aswell.

We plan on setting deadlines and goals to ensure progress is completed in a timely manner. First, we plan to identify requirements and select the data we will use for backtesting. Then, we plan on building the platform brick by brick. I expect our results to include a working platform with simulations that provide quantifiable results for our users. To evaluate myself, I will check whether my work is completed by deadlines and integrates smoothly with Jash’s work. Our end goal with this project is to develop a platform that is reliable, and able to provide financial insights.