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Senior Design I

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Individual Capstone Assessment

Our senior design project is an event planning application. We wanted to create a centralized event life-cycle management tool that focuses on helping college community organizations and fills in the gaps for competitive tools that previously exist. College organizations thrive on having fun and accessible events that their general body members and students can enjoy and engage in. Upon getting more involved on the executive side of college organizations and clubs, a fresh start may seem daunting since event planning is far from being on the radar of college students, whose focus is mostly on academics. This tool will be a web application that these student organization executive members can use to help streamline their event planning from start to finish.

Upon coming to the University of Cincinnati in 2018, I switched my major 3 times. I started off as a Mechanical Engineering of Technology (MET) student and transitioned into a Pre-Physical Therapy major after my first year of MET. Post COVID-19, I eventually switched into Computer Science in 2021 and have been studying this ever since. My college curriculum is the same as most students in Computer Science, however, my electives in my senior year focused more on AI/ML and Data Science. Classes like Data Structures (CS2028) and Programming Languages (CS3003) were my favorite because they taught me the structure of coding/programming as well as what I could use this code/programming for to solve intricate

algorithms and problems. With all my major switches, I am forced to take these classes in my last few semesters after my 5000 level electives: Database Design & Analysis of Algorithms (CS4071), Database Design & Development (CS4092), and Software Engineering (ECEE3092).

Switching to Computer Science in 2021, I have co-oped at two companies: FIS as a Technology Innovation Development Intern and Siemens Digital Industries Software as a Software Developer Co-op. I worked at FIS for about one year with two full-time semesters and one part-time, and now working part-time at Siemens after two full-time semesters since January 2023. At FIS, I spent a lot of time at different projects:

- Created Gmail API that scraped and parsed user inboxes for 100s of e-receipts' and their transaction information using regex that utilized Google Cloud Platform to generate API method calls to a Python-Flask framework application.
- Produced an insurance premium calculator app using employee fitness data tracked from FitBit wearable devices run on a Node.js and Angular paired with FIS's internal database technology.
- Added a database search function, 5 data validation cases, and UI/UX features on a form recognizer application run on Microsoft Azure, AWS, and Angular.
- Worked in a team of 3 to create a mock web server for learning consultants within an internal gamified app startup.
- Developed and pushed an address validation/autocomplete feature within GoCart, an online payment solution startup, and sped up the UX consumer input flow by 62% using AWS technologies.

At Siemens I have been working on designing and developing new features for their internal Product Lifecycle Management software applications, Polarion and Solutionlink, in a Full stack environment with HTML/CSS, AngularJS, Java, and SQL. I expect to apply all these skills I learned into creating my own life-cycle management web application with a scope to help student organization help plan their events easier.

I am super motivated to participate in this project because I am also involved in student organization at the University of Cincinnati. For the past two years, I have been the President for PASO (Pinoy-American Student Organization), which has grown so much in the past two years, even winning Student Organization of the Year in 2023. I am still the current President of the club as of now. I also started a new organization here, Society of Asian Scientists & Engineers (SASE), this past September. I am the current president of two large organizations at the university, all holding different size-able events throughout the year. I know the ins and outs of event planning and its shortcomings, so I have a firm knowledge base of the subject to apply. This project also gives me a sense of empowerment because I could potentially change and accelerate the event planning process for college organizations through this application.

At the end of the Spring 2024 semester, I expect our group to have a fully functioning application. With the connections I have made these past two years networking with other organizations on UC's campus and around the country, I created a survey to narrow down our scope. With 30+ responses from 12+ different schools around the US, we were able to narrow down the most difficult aspects of event planning to focus on and improve. When these features are implemented and thoroughly planned out, tested, and validated, then I believe I can call this capstone project a success. Once we are done with the functioning web application, I will send the application out to the members who responded to the survey and provide a feedback form for

them to critique the application. Our team could then choose whether or not to keep putting work into this application after graduation or not, but at the end, we all were able to learn and produce something meaningful, and that is all I ask for in the completion of my senior design project.