Trien Dau

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CS5001

INDIVIDUAL CAPSTONE ASSESSMENT

Throughout my journey as an international student at the University of Cincinnati, I have grown professionally. And for my senior design project, I and my friend decided to create a digital AI assistant, inspired by Siri, Hey Google, and Alexa. To me, this is a very interesting topic. By working on this project, I can utilize every programming skill I have acquired up until this point, along with having the chance to learn and work with different APIs and programming languages. I strongly believe that this project will reflect what I have learned at UC and also show what I am capable of. With this, I will be able to mark my professional growth as a Computer Science student.

Throughout the last 4 years as a Computer Science student at the University of Cincinnati, I have had the chance to take many interesting courses to improve my knowledge regarding Computer Science as well as develop essential personal skills. Data Structures (CS2028C) is probably the first CS course that introduced me to different data structures and algorithms. This laid the first foundation for what I needed to learn to become a professional Program Developer. Furthermore, AI Principles And Applications (CS4033) introduced me to the concept of Artificial Intelligence and how it works. For this reason, I feel very comfortable working with Artificial Intelligence and

Machine Learning and putting them to use for my Senior Design Project. Software Engineering (EECE3093C) taught me the concept of software and how to properly design a working, active software. Moreover, we have had the chance to develop many personal skills such as teamwork, leadership, communication, and critical thinking, which are all crucial for my future career.

Throughout my 5 co-op semesters, I have done EEP for 1 semester and worked as a Computer Science Co-op at SHP for the remaining 4 semesters. SHP is an architecture firm located in downtown Cincinnati, they recruited me as a Co-op to help develop extra functionalities for Revit, a modeling program that engineers and architects use to design structures and layouts of buildings. For this reason, I have had the chance to apply what I already knew about C#, mathematics, and UIUX to the projects that I worked on. Furthermore, I had the opportunity to learn more about WPF for UI design and the MVVM model (Model View ViewModel) to organize our coding projects. Moreover, I strongly developed my communication, teamwork, leadership, and critical thinking skills. I am confident that my coding and personal skills have developed to a point that should help me step into the professional world of Software Development.

Since me and my friend agreed to do a digital AI assistant, I feel super excited and cannot wait to start working on this project. This project allows me to apply my knowledge of programming languages, program development, and UIUX into practice. Furthermore, I will also have the chance to work with new APIs like Google's and YouTube's, Artificial Intelligence, and Machine Learning, as well as gain experience

building an app/virtual assistant. This project is also a chance for me to challenge myself to work on something that I've never done before. Working on this project, I am confident that I will be able to learn new knowledge and grow professionally. I am excited that I will be able to show what I've learned along with my capability through this project to attract potential employers.

My preliminary approach to the solution would be to research and define the scope and goals of the project, such as functionalities and the processes behind it. After that, we need to take into account different aspects like data collection, speech recognition, Natural Language Processing, Machine Learning models, UIUX, user privacy, and integration with third-party services. This will be a very tedious project but I believe that by doing each step punctiliously, this project will turn out beautifully. Last but not least, testing and quality assurance will also be carried out carefully to ensure a smooth experience for the user. For self-evaluation, I understand that it depends on how our project turns out to be. If all of its functionalities are working and there are a few to no bugs, then we know that we have done a good job designing, developing, and testing our product.