**Name: Tharun Ravi Kumar**

**Individual Capstone Assessment**

**Introduction**: My senior design project aims to create a comprehensive personal financial program that will assist users in tracking subscriptions, managing everyday spending, and honing their budgeting abilities. The software will also offer personalized stock market investing advice based on the user's financial habits and interests. I aim to provide a comprehensive solution combining long-term investment planning and short-term financial tracking by merging these features. One intriguing feature I'm working on is a machine learning-powered scan function that uses my machine learning certification from Udemy to gather data from bills and receipts.

**College Curriculum Influence**: My experience at the University of Cincinnati has influenced how I approach this topic academically. I've learned how to construct scalable, effective solutions through courses like Data Structures and Algorithms, which is crucial for developing apps that safely and swiftly manage massive volumes of customer data. Furthermore, Software Engineering helped me embrace best practices for designing a user-friendly and intuitive interface by providing me with insights into building reliable, user-centered apps. Furthermore, knowledge about how to handle and preserve financial data safely has been greatly aided by database systems. Among other things, these classes have given me the technical know-how required to take on challenging app development tasks.

**Co-op Experience Influence**: My web development co-op experiences with MeditechSafe further equipped me for this project. I created a tool at MeditechSafe to automatically test web apps to find defects and enhance the overall quality of the code. My ability to solve problems has improved as a result of this practical experience, which will be helpful as I negotiate any obstacles in the process of developing feature-rich finance software. Furthermore, my cooperative experience has enhanced my teamwork and communication abilities in both technical and non-technical contexts. My ability to strike a balance between technological innovation, practical use, and cooperation has been honed by these experiences, and it will be essential for our capstone project's success.

**Motivation and Preliminary Approach**: The opportunity to connect technology and personal finance in a way that can immediately improve consumers' daily lives is what excites me the most about this project. Being a supporter of technology innovation and financial literacy, I'm thrilled to be developing a tool that assists consumers in making wise financial decisions. By only scanning receipts, the scan function will make data entry simple for users, do away with the need for manual entry, and promote improved financial tracking. My initial strategy comprises classifying transactions, analyzing scanned data, and providing consumers with insights based on their spending patterns using optical character recognition (OCR) and machine learning models.

**Expected Results and Self-Evaluation**: I anticipate that this initiative will provide a comprehensive personal financial tool that will empower users with practical investment ideas in addition to streamlining daily spending tracking. The project will be successful when the scan capability is finished, along with an intuitive user interface and efficient data analysis. I'll assess my own contributions by gauging the precision of the app's bill-scanning feature and its general usability. To make sure the tool is useful and practical; I will also ask team members and future users for input. Success will ultimately be determined by how effectively the software works with users' daily financial habits and enhances their overall financial health.