

Jason Hampshire

CSCI 496 Internship Capstone Project

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### Internship Project Proposal

This summer, I have been invited to work as an intern as a part of Infosys's InStep program. This internship will be through their Indianapolis office in the One America tower, located roughly a mile away from the IUPUI campus. The program is set to span 8 weeks, starting on May 10th, 2021 and end July 1st, 2021. As a part of this internship, I have been tasked with working on a Share Market Prediction application on a team with another intern, a student from the University of Indianapolis. At the end of the internship, I will be expected to submit said application to be reviewed as completion of the program.

This Share Market Prediction application project will try to show first level of information and a glimpse for any stock's future prediction using Open source technologies. A user will be able to create their profile, company information they are interested in, and configure rules to check when it is right time to buy any stock. The idea of this project is to allow user to choose his / her stocks and fetch related information of that stock that includes current price and prediction for next 1 week, 1 month and 6 months. It will allow user to take a decision on his investment plan and portfolio. The application is planned to be for demonstration purpose only but can be used for R&D purpose or converted with some more use cases for some potential financial clients of Infosys.

The project has a list of expected outcomes that have been provided by the company:

- A user will be able to create a profile through a signup page, login, and edit a user profile. The login should have proper authorization logic implemented.
- A user will be able to choose their favorite stocks to be displayed on a page.
- Related information and graphs about the stocks should then be displayed on said page.
- A user will be able to create specific fields by defining a formula for said field.
- A notification system will be implemented that will allow a user to set a threshold value that will send a notification if a stock overtakes said threshold.
- User information will be stored in SQL database.
- External fetching APIs will be implemented to pull stock data into the application in real-time.
- Adequate User Acceptance Testing will need to be done near the end of the internship using code based testing such as PHPUnit and comparative baseline testing against third-party stock exchange applications such as Robinhood or Codebase.
- An End to End demonstration will be conducted at the end of the of the internship.

To implement this project, the application will be hosted on a company Virtual Machine. Infosys has a mentor assigned to this project; a Technology Architect named Kuma Vikas Singh. If we have any questions or need any help with anything, we are to ask him. We have weekly meetings setup with Singh where we are to discuss the progress we have made, as well as various help sessions that are conducted sporadically throughout the internship.