

UNIVERSITY OF CALGARY
DEPARTMENT OF COMPUTER SCIENCE
DEPARTMENT OF SOFTWARE ENGINEERING

SENG 550: ENGINEERING LARGE SCALE ANALYTICS SYSTEMS

Project Proposal: Stock Portfolio Manager

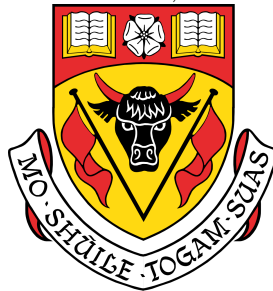
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Key Project Objectives

Must-Have

- Forecasts and predicts potential earnings based on historical performance
- Recommends stocks based on Canadian All-Star Dividend Ranking

Should-Have

- Breaks down portfolio's categories and shows top performing categories (energy, food, tech)

Nice-to-Have

- Schedules reinvestment and buys overtime so auto-invest and alerts the user on pricing
- Has a “what you could've generated x years ago” based on historical trends of stocks selected
- Connects to a budgeting app that visualizes the net-worth breakdown of all assets (savings, investments, mortgage, etc) i.e. youneedabudget API
- Connects to trading apps like WealthSimple, QuestTrade, etc

Tools of Platforms Needed

We will choose either Spark or Flink based on future implementation. We are aware that Flink has real-time data processing which would make it significantly faster than Spark but Spark is almost 2 times more popular than Flink based on Github forks so from a community support standpoint Spark has better resources and guidance for our learning curve. SENG550 is taught in Spark as well.

Details of the Project Management Plan

<https://github.com>

We will use Git as a version control system, and GitHub to host the Git repository.

<https://trello.com/en>

Tasks will be managed using Trello, where tasks will be created on an as-needed basis, and anyone will be able to pick up unassigned tasks based on their own interests.

Reference Sources

The following are potential resources we might use for the project:

<https://finance.yahoo.com/>

<https://github.com/public-apis/public-apis#finance>

<https://dividendgrowthinvestingandretirement.com/canadian-dividend-all-star-list/>

<https://www.tawcan.com/>

<https://developer.bloomberg.com/>

<https://rapidapi.com/category/Finance>