OWEN MCCADDEN

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EDUCATION

University of North Carolina at Chapel Hill – Chapel Hill, NC May 2023
Bachelor of Science in Computer Science and Bachelor of Science in Economics

- GPA 3.87/4.00

Relevant Coursework

- Object-Oriented Programming, Data Structures, Discrete Structures, Multivariate Calculus, Systems Fundamentals, Models of Language and Computation, Linear Algebra, Financial Accounting, Microeconomics, Macroeconomics

SKILLS

Programming Languages: Python, Java, JavaScript, C
Frameworks and Tools: AWS (S3, Lambda, DynamoDB, API Gateway, IAM), RESTful APIs, HTML/CSS
Certifications: AWS Cloud Practitioner Essentials, Bloomberg Market Concepts, Udemy Python for Financial Analysis

EXPERIENCE

Principal Financial Group – Des Moines, IA (Remote) May 2021 – Present
Data Engineer Intern

- Collaborating with multiple teams to concurrently develop ETL processes to migrate on-premises data to AWS
- Developing a CDK in Python to create and provision AWS resources and infrastructure for ETL processes
- Migrating on-premises data to an AWS Redshift data warehouse using AWS Glue, S3 and Lambda for ETL jobs
- Utilizing AWS API Gateway and Lambda to perform read and write operations on DynamoDB tables

PERSONAL PROJECTS

github.com/owenmccadden

Versify (Python, Javascript) Summer 2021

- Created a web application to generate new verses of any song with machine learning based on the original lyrics
- Collected data from the Genius API and used the OpenAI API and GTP-3 to process the lyrics and write new verses
- Constructed a REST API using AWS API Gateway, Lambda, and DynamoDB and hosted the web app on AWS S3

Algorithmic Trading Interface (Python) Spring 2021

- Engineered a framework to implement algorithmic trading strategies using the Robinhood API
- Provided a feature to calculate and visualize expected changes in option prices using the Black-Scholes Model
- Designed an algorithm using this system to optimize the Sharpe Ratio of a portfolio using a Monte-Carlo simulation

Least Squares Optimization (Python) Spring 2021

- Developed a python process to generate an n-degree polynomial of best fit for any given dataset using least squares
- Programmed methods to perform other matrix operations such as the Gram-Schmid process and vector projections

Stock Twitter Sentiment Analysis (Python) Fall 2020

- Utilized the Twitter API to gather recent Tweets about stocks given a specific list of tickers
- Classified the sentiment of the Tweets using the Text Processing API as positive, negative, or neutral
- Computed average sentiment scores for each stock and compiled the data into a CSV or XLSX file using Pandas

Poker Game (Java) Fall 2020

- Developed a full-functioning game of Five Card Stud Poker complete with a graphical user interface
- Utilized encapsulation to divide the program into abstractions such as card, deck, hand, and poker game classes

Random Pattern Animations (JavaScript) Fall 2019

- Created a webpage to display a gallery of randomly generated, dynamic Processing.js animations
- Applied stochastic processes and inverses to randomize the motion and features of the patterns

ADDITIONAL INFORMATION

- Member of Tarheel Alpha (a quantitative finance and trading club) and UNC Investment Banking Bootcamp
- Member of Undergraduate Finance Society, Carolina Analytics and Data Science, and Product Management Club
- Interests include lacrosse, poker, and weightlifting