

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 and Algorithms, Discrete Structures, Systems Fundamentals, Linear Algebra

SKILLS

Programming Languages: Python, Java, JavaScript, C

Frameworks and Tools: AWS (S3, Lambda, DynamoDB, API Gateway, IAM), RESTful APIs, HTML/CSS, SQL, Figma, Unit Testing, Git

Certifications: AWS Cloud Practitioner Essentials, Bloomberg Market Concepts, Udemy Data Structures and Algorithms in Python

EXPERIENCE

Principal Financial Group – Des Moines, IA (Remote)

May 2021 – Present

Data Engineer Intern

- Working on an Agile team to concurrently develop an ETL data pipeline 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 Glue, S3 and Lambda for ETL jobs
- Utilizing AWS API Gateway and Lambda to perform read and write operations on DynamoDB tables

Product Management Club – Chapel Hill, NC

January 2021 – Present

Team Member

- Collaborating with a team of student developers and designers to prototype software products for startups
- Communicating with startup management to understand and implement business requirements
- Designed a frontend app prototype for [CulTrue](#), a software analytics company looking to help improve workplace culture

PERSONAL PROJECTS

[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