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 Arts in Economics

- GPA 3.6/4.0

Relevant Coursework

- Analysis of Algorithms, Bioalgorithms, Data Structures, Databases, Computer Organization, Web Development

SKILLS

Programming Languages: Python, Java, Ruby, TypeScript, Kotlin, Node.js, React.js, C, PHP
Frameworks and Tools: AWS (S3, Lambda, DynamoDB, API Gateway, Cognito, CDK, EC2, VPC), SQL, NoSQL Databases, Git
Certifications: AWS Cloud Practitioner Essentials, Bloomberg Market Concepts

EXPERIENCE

Amazon Web Services – Arlington, VA May 2022 – Present
Software Development Engineer Intern

- Created an IPv6 rDNS Sweeper to clean up dangling PTR records on IP addresses for customer VPCs and EC2 Instances
- Designed and developed a service written in Ruby to run Lambda functions on a cadence to flag and delete dangling PTRs
- Integrated service with internal APIs to handle DNS data and perform CRUD operations on a DynamoDB table
- Provisioned AWS services and infrastructure using a CloudFormation stack generated by CDK code written in TypeScript

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

- Developed an ETL pipeline to migrate on-premises data from IBM DB2 to AWS S3
- Utilized AWS CDK and Python to programmatically provision all infrastructure and AWS services for the data pipeline
- Designed and built a REST API for a collaborative intern project using API Gateway, Lambda, and DynamoDB

PERSONAL PROJECTS

SST Demo (React.js, Node.js) Fall 2021

- Developed a web application using the Serverless Stack framework to store and display notes and files for individual users
- Provisioned infrastructure using AWS CDK and built the backend using API Gateway, Dynamo DB, Lambda, and Node.js
- Utilized AWS Cognito / IAM for user authentication, Stripe for customer payments, and React.js / Bootstrap for the frontend

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
- Wrote the verses using a Python Lambda function and stored user-generated verses in a DynamoDB table

Algorithmic Trading Interface (Python) Spring 2021

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

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 a 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