Scott Sutherland

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LinkedIn
Github

New university graduate with B.S. Data Science and minor in Mathematics.
Interested in pursuing challenging, data-driven software and analytics projects.

Professional Experience

Software Engineering Intern | Amazon
June 2022 – Sept 2022

- Designed and implemented a versioning system for objects controlled by users via a REST API, enabling safe rollback to previous states.
- Interacted with DynamoDB NoSQL databases to read and write version information.
- Improved object rollback resolution time from hours to milliseconds by eliminating dependencies on manual search and recovery.
- Helped optimize existing database calls adjacent to versioning system work saving thousands in read/write costs.

June 2021 – Sept 2021

- Designed and implemented granular access controls for a REST API to work end to end with a front-end UI for Amazon Alexa, enabling customers to safely interact with the API in a self-service fashion.
- Implemented functionality to ensure calls from front end to back end are authenticated, protecting customers with a secure environment.
- Improved service scalability by removing dependency on manual internal support, decreasing time to resolution from days to milliseconds.
- Wrote documentation to detail design, implementation, use, and how to expand upon completed access control work.

Software Engineering Intern | Kernel Labs
June 2020 – Sept 2020

- Developed web crawlers using PHP and cURL designed to crawl multiple pages in parallel via a breadth first search.
- Set up MySQL databases to store data from web crawlers and serve as queues for crawls of significant depth.
- Created custom Mechanical Turk tasks to facilitate gathering of ML training data and built tools to gather/clean classification data using NodeJS.

Projects / Other Work

Graph-Based Reddit Recommendation System | UCSD

- Worked with 3 peers to develop a recommendation system for communities on Reddit for users given their interactions on the site with other users and communities represented as a graph with comment text corpus and graph community embeddings.
- Outperformed non-graph collaborative filtering methods such as Cosine and Jaccard similarity at encapsulating true interactions for larger number of recommendations (> 10) by 60% by the precision metric.
- Utilized tools suite of TigerGraph for ML algorithms and data storage.

Smart Cookbook | IvyHacks Hackathon

- Worked with 2 peers to create a website which pairs people with potential meals.
- Used JavaScript to call recipe API and recommend recipes to users based on food they specified they already had.
- Set up Firebase database for user profile storage.

Education

University of California, San Diego
San Diego, CA
Sept 2019 – March 2023
B.S. Data Science
Minor in Mathematics
3.63/4.00 GPA

Skills and Technologies

(In rough order of proficiency)
Java (JUnit, Log4j, Mockito, Lombok, Guava, etc)
Python (numpy, pandas, scikit-learn, pytorch, tensorflow, dask, etc)
SQL
NoSQL
Git
R (Tidyverse)
JavaScript (NodeJS, D3.js)
HTML/CSS
MATLAB
LaTex
Bash
PHP

Relevant Coursework

Data Structures and Algorithms
Data Modeling
Data Visualization
Databases
Machine Learning (Recommendation Systems, Deep Learning, Supervised/Unsupervised Learning)
Graph Theory
Statistical Testing
Calculus
Linear Algebra
Differential Equations
Combinatorics