Swapnil Shaurya

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EDUCATION

The University of Texas at Austin, Austin, TX — Graduation: May 2024
Bachelor of Science, Computer Science — Overall GPA: 3.8/4.0
Bachelor of Arts, Economics

- Coursework: Data Structures, Algorithms, Software Engineering, Operating Systems, Intro. to Machine Learning, Computer Architecture, Linear Algebra, Multivariate Calculus, Probability and Statistics, Micro-Economic Theory

WORK EXPERIENCE

Software Engineer Intern — Aug 2022 – Dec 2022
Google

- Document AI team within **Google Cloud**, using token classification/NLP to optimize document entity extraction
- Implemented a novel **E2E** process for training, prediction, and evaluation of open-source **PyTorch** models on **GCP's Vertex AI** infrastructure – resulting in evaluation f1 scores on-par with current DocAI model framework
- Developed data pre-/post- processing libraries in **Python**, with **unit tests** and integration into E2E process
- Created new prediction endpoint for Doc AI's **RESTful API** using **Python**, **C++**, and a custom-built **Docker** image

Software Engineer Intern — May 2022 – Aug 2022
Charles Schwab

- Worked on the Client Data Management Technology team, building modern **Java distributed microservices** applications in a high volume, highly available environment using **Spring Boot** framework and **Gradle**
- Implemented a **Restful API** to optimize data retrieval from **DB2** and **Yugabyte** databases for 40 million accounts
- Wrote **SQL** queries to validate/retrieve data, and designed **JUnit** cases to test developed features

Data Analytics Research Intern — Aug 2021 – Dec 2021
MD Anderson Cancer Center

- Collected & processed demographic/health data with **MySQL**, creating models in **Python** with **SciKit-Learn**
- Applied the Elbow Method with **K-means clustering**, and principal component analysis for significant features
- Presented research at the Ken Kennedy AI and Data Science Conference

Machine Learning Research Assistant — Aug 2020 – Jun 2021
The University of Texas at Austin

- Authored a **research paper** that proved 93% efficacy of structured white noise reduction using GANs
- Created a style-based GAN (**StyleGAN**) that implements the pixel2Style2pixel framework in **Python** with **PyTorch**
- Trained ~40,000 iterations of the model on the Texas Advanced Computing Center (TACC) supercomputer

PROJECTS

Electrends

- Created a Web app (electrends.me) that aggregates data on Texas elections, politicians, and electoral districts
- Designed the frontend using **JavaScript (React, Bootstrap)** and scraped data from the web and other APIs
- Developed a **RESTful API** using **Postman** and **Flask**, deployed with **Docker** and **AWS**

Budgeter App

- Designed a **Java** application that helps track expenses and build monthly budgets
- Utilizes **Node.js** for the **Backend** with express framework and stores user data with **MongoDB** database

Medicine Manager

- Created an Android app that tracks medications, reminding users when to take their medicines and the dosages
- Developed the **Front-End UI** in **Android Studio (in Java)** and used **Firestore Database** to store user data

SKILLS

Programming: *Proficient:* Java, Python, C; *Exposure:* JavaScript, React, HTML/CSS, Swift, MySQL, R
Machine Learning Libraries: *Python:* SciKit-Learn, PyTorch, TensorFlow
Cloud Platforms: *Google Cloud (GCP):* Associate Cloud Engineer Certification, *AWS*: class and project experience

LEADERSHIP

Assoc. for Computing Machinery, *VP Finance & Active Member:* Handled club finances and helped plan/engage activities
Texas Code Orange, *Volunteer Tutor:* Teaching scratch programming to underprivileged kids in downtown Austin