Daniel Chen

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EDUCATION

The University of Texas at Austin — Austin, TX
B.S. Computer Science, B.S. Mathematics; GPA: 3.85 — *Aug. 2018 – Dec. 2022*

EXPERIENCE

Affirm — San Francisco, CA
Software Engineer — *Jun. 2022 – Feb. 2023*

- Aided in **Snowflake** region configuration of roles, databases, tables, and warehouses using **Terraform** and refactoring of existing **Dbt** code to include new regions.
- Designed and deployed Buildkite CI tests using **Python**, **Airflow**, and **K8s** to identify PII usage across all **Dbt** models.
- Developed **Airflow** jobs to track replicated **Snowflake** data freshness, providing BI teams clarity on updates and improving on-call resolution times.
- Performed independent cost analysis on company's **Dbt** and **Snowflake** scaling, which lead to multi-million dollar savings in department usage of the services.
- Maintained **Python** CLI tooling used to deploy new **Dbt** ELTs, providing continuous support for all users.
- Designed and supported **Looker** dashboards for critical reports and email alerts.

Integra FEC — Austin, TX
Data Analyst — *Jan. 2022 – Apr. 2022*

- Designed **Python** scripts to trace blockchain transactions and generate charts in **Jupyter** using **Matplotlib** and **Seaborn** visualization packages.
- Redesigned and provided documentation for research-grade **C#** project used to generate mark-up and mark-down pricing data of municipal bond sales from financial institutions.

H-E-B — Austin, TX
Data Engineer Intern — *Summer 2021*

- Worked on **React** dashboard using **PostgreSQL** databases to display ETL job statuses, user database permissions, and service-level agreements (SLAs) using **K8s**, **Docker**, and **Datadog**.

The University of Texas at Austin — Austin, TX
Teaching Assistant, CS 439: Principles of Computer Systems — *Jan. 2020 – Dec. 2021*

- Taught to approximately 450 students topics relating to the x86-64 **UNIX** operating system as well as the **C** language, including CPU scheduling, process management, synchronization, virtual memory, file systems, and networking.
- Developed shell scripts in **Bash** and **Python** to test student projects and assignments.

PROJECTS

Ray Tracing
Developed a ray tracing process in **C++** using object-oriented concepts, that simulates light diffusion off materials.
- Implemented camera operation, spherical objects, and accurate depiction of light reflectance and refraction off of metalic, lambertian, and dielectric materials.

Raft Distributed Consensus Protocol
- Designed a distributed systems consensus service "Raft" using **Golang** that focuses on fault-tolerant replications between peers.
- Recreated Raft's intricate leader and follower requirements, log replication, and log snapshot optimization theories.

PintOS
- Created in **C** the virtual memory management, process priority scheduling, and file system components of **UNIX** based OS.

PROGRAMMING SKILLS

- **Languages**: Modern C++, Python, Golang, R, Java, SQL
- **Technologies**: Linux, Shell Scripting, Snowflake, Machine learning, Dbt, Airflow, Git, CI/CD, Docker, Looker, Terraform
- **Relevant Coursework**: Distributed Systems, Algorithms, Operating Systems, Data Structures, Probability and Statistics, Advanced Machine Learning