Shi Da Felix Wang

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EDUCATION

University of California, San Diego   Sep 2021- Dec 2022
M.S. - Electrical and Computer Engineering, GPA: 3.8

Tsinghua University   Sep 2016 – Jun 2020
B.Eng. - Mechanical Engineering, Awards: CSC Full Scholarship, Inditex-Tsinghua Scholarship, Evergrande Scholarship

SKILLS

- Programming: Java, C/C++, Python, Golang, Bash, SQL, Scala, JavaScript/HTML/CSS
- Technology: Kubernetes, Docker, AWS services, Kafka, Airflow, Spark, PLC, Jenkins, Node.js, jQuery, Express.js, NiFi
- Database: PostgreSQL, MySQL, MongoDB

EXPERIENCE

Rose ML Lab, UC San Diego   Dec. 2022 – Present
Software Developer Engineer   *San Diego, CA*

- Engineered a **Python package** that empowers users to effortlessly collect, preprocess, and manage **data pipeline** for desired datasets from the database, and call integrated ML models with just **one line of code**, resulting in a **30% increase in efficiency**.
- Utilized **object-oriented programming** principles to encapsulate workflows, providing a **modular and scalable architecture**.

Match Group, LLC - Tinder   Jun. 2022 – Sep. 2022
Software Developer Engineer Intern   Los *Angeles, CA*

- Established a **global Airflow cluster** with **Docker** & **Kubernetes** as the **backbone of data pipelines** in the **Tinder app**, resulting in a **25% increase in data processing speed and app performance**, fostering seamless collaboration among backend teams.
- Provisioned infrastructure for the Airflow cluster including **Redis cluster** on **Elasticache, PostgreSQL** on **RDS** and **S3** in **AWS**.
- Integrated Airflow into **CI/CD pipeline** through in-house **Terraform scripts** and **Jenkins**, reducing deployment time by **30%**.
- Coordinated with various teams and set up access control in pipeline process that **enhanced data infrastructure security**.
- **Led a six people hackathon team** to pitch a *Double Dating Service* which was **appreciated by CTO** and built a demo with **Figma**.

Yonyou Network Technology Co., Ltd.   Nov. 2020 – Jan. 2021
Software Developer Engineer Intern   *Beijing, China*

- Designed database schema for a new Big Data platform of a **Fortune Global 500** company with cross-departmental collaboration.
- Individually cleaned deprecated and duplicate fields in database, **improving data efficiency by 40%**.
- Built **data architecture** with Operational Data Store (ODS), Data Warehouse (DW) and Data Mart (DM), increasing data reliability.
- Established automated **ETL data pipeline** with **Apache NiFi** via **MySQL** server to simplify data wrangling process.

Robotics and Automation Lab, Tsinghua University   Dec. 2019 – Sep. 2020
Software Research Assistant   *Beijing, China*

- Created a novel **predictive control theory** to track a fly's movement and increased tracking accuracy by **40%**.
- Built predictive models using **recurrent neural network** via **TensorFlow** and imported the model to **embedded system** via **C++**.
- **Wrangled data** collected from the robotics platform, camera and optical system in a **Python** Environment.

PROJECTS

Distributed Cloud Storage System (Golang)   Jan 2022 – Mar 2022
Individual Project, Department of Computer Science and Engineering   *UC San Diego, CA*

- Built a server with **self-designed HTTP protocol** that supports restful requests, server files and response status of HTTP/1.1.
- Created a **cloud file hosting service** that syncs files based on **TCP/IP** protocol and interacts with clients via **gRPC**.
- Constructed a fault-tolerant **distributed storage system** based on **Raft** algorithm to ensure data integrity and consistency.
- Implemented **distributed computing** through different servers including partition of data, transmitting, sorting and merging data.

Full Stack Development (Node.js, JavaScript/HTML/CSS, MongoDB)   Mar 2022 – May 2022
Project Lead, Department of Computer Science and Engineering   *UC San Diego, CA*

- Established **website's analytical data collection** and visualized website's usage history for data analysis on optimizing web pages.
- Set up user login system with **REST API** using **Node.js, jQuery and Express.js** to transfer data between **MongoDB** database.

Operating System Design and Implementation (C)   Jan 2022 – Mar 2022
Individual Project, Department of Computer Science and Engineering   *UC San Diego, CA*

- Constructed the **process scheduling** mechanism of the kernel, including FIFO, LIFO, Proportional and Round Robin.
- Implemented **IPC** including synchronization and mutual exclusion via semaphores with Signal and Wait functions.
- Built a **kernel thread package** for UMIX which includes Initialize, Create, Yield, Get, Schedule, and Exit of thread operations.