Yiran Su

6805 Wood Hollow Dr, #233

◇ yiransucdr@gmail.com ◇ LinkedIn account ◇ (512)-999-5939

Austin, TX

EDUCATION

- **the University of Texas at Austin** — Austin, TX, USA
  *M.S. in Engineering, **Software Engineering and System** as major **GPA**: 3.73/4* — *Aug. 2019 - May. 2021*

- **Sun Yat-sen University, School of Data and Computer Science** — Guangzhou, China
  B.E. in Network Engineering, top 10% in the major. — *Aug. 2015 - Jun. 2019*
  - **Course Highlights** Data Structure & Algorithms, Operating System, Computer Network, Web Programming

SKILLS

Programming Language C++, Python, Java, HTML, CSS, JavaScript, Kotlin, Shell, SQL, GoLang
Framework and Tools React Native, Flask, PyTorch, Tensorflow, Docker, MongoDB, Kubernetes

INTERN EXPERIENCE

- **Coherent Logix Inc.** — Software Dev Intern, May. 2020 - Aug. 2020, Austin, USA
  - The topic was **neural network quantization**, a technic to simplify the original neural network model, and persist the original model precision.
  - Accomplished **16/8/4-bit** Quantization Aware Training (**QAT**) with **Tensorflow 2** (**Python**). *
  - Developed a set of **QAT generation & validation APIs** in **TensorFlow 2** (**Python**) to simplify further applications. **

- **Tencent Inc.** — Software Dev Intern, Sept. 2018 - Mar. 2019, Shenzhen, China
  - A **pattern-based natural language parsing framework** in **Python** for a **task-oriented chatbot**.
  - Deployed on a **Tornado** (Python) Server, handled **100k+** user vocal requests per day, optimized with **27%** less latency.
  - An **automatic** log analyzer in **Python** to evaluate user behavior (customer stickiness, feature performance, etc.)

- **Graduate Teaching Assistant** — EE 422C (**Java**), UT-Austin, Jan. 2020 - May. 2020
  - Led weekly lectures about the most crucial Java concepts, including polymorphism, generic, multithreading, etc.

PROJECT EXPERIENCE

- **Share Your Review** — Course project for EE 382V at UT-Austin, Sept 2019 - Dec 2019
  - A full stack project that requires both frontend (web/Andriod/ReactNative) and backend (response framework /database) implementation. The project goal is to help people connect with nearby book readers.
  - Backend: **MVC** structured **Flask** & **Flask-RESTful** (**Python**). **Firebase** and **PyMongo** for database.
  - Accomplished a **web** frontend with **HTML/CSS/Bootstrap** and embedded it into our Flask-RESTful backend.
  - Applied **Kotlin** for the **Android** frontend. Designed a **reusable cardview template** for the team. **Volley** to handle requests. Kotlin's **Camera & Location API** applied.
  - **React Native** frontend with **Expo**. APIs include camera, location, sharing (social media) and notification.

- **Sun Yat-sen University Club Information Platform** — Mar 2018 - Jun 2018
  - Designed the app to assist university clubs to spread their event information. Participated as frontend engineer.
  - **Android** frontend in **Java**. **Retrofit2** and **RxJava** applied. Web frontend in **HTML/CSS/JavaScript**.

- **2018 International Aerial Robotics Competition** — Computer Vision, Sept 2017 - Aug 2018
  - For ground object detection, designed an **OpenCV**-based Support Vector Machine (SVM) classifier, with a self-implemented Histogram of Oriented Gradient (HOG) descriptor in **C++**.

- **Distributed System Design** — MIT 6.824 online open course, Sept 2020 - present
  - Implementing **MapReduce** and **Raft** in **Go**.

PUBLICATIONS

Manor, L., **Su, Y.**, et al. "**What is FAFSA? Interpreting non-technical jargon in domain-specific text**", COLING 2020, submitted.

- Proved the computational linguistic association between jargons and the corresponding context with **PyTorch** (**Python**). BERT embeddings applied.

* On ResNet and MobileNet (neural networks) with 16 & 8-bit QAT, the model accuracy drop was within 3%.
** The APIs enable transform from a non-QATed model to a QATed model and compatible with all sequential/functional models(self-defined, loaded, Keras-imported, etc.).