XINYU LI

University of California, San Diego
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EDUCATION

University of California San Diego - *MS, Computer Science* Sep 2021 – Mar 2023(expected)
Zhejiang University - *BS, Electrical Engineering* (GPA: 3.87/4.00) Sep 2017 – July 2021

SKILLS

Languages: Java, Python, Golang, C, MATLAB, JavaScript, SQL, Haskell
Frameworks: Spark, Spring Boot, TensorFlow, PyTorch, scikit-learn, Pandas, NumPy, Scipy, Scrapy, MyBatis
Databases/Tools: MySQL, Android Studio, Docker, AWS, Git, Maven, Postman
Knowledge: OOP/OOD, Data Structure, Machine Learning, Big data, NLP

Research INTERNSHIP

Contact-less Heart Rate Monitoring Application Based on Facial Video *Research Intern*
ZheJiang University Oct. 2020 – Apr. 2021

- Implemented non-contact Remote photoplethysmography (rPPG) method in Python to extract heart rate signals and estimated heart rate from RGB face in real time on PC platform.
- Tested the rPPG algorithm based on UBFC-RPPG dataset with **42** facial videos, which received Mean Absolute Error (MAE) and Standard Deviation (SD) as **4.92 bpm** and **7.82 bpm**, respectively
- Developed mobile App version on Android Studio, by designing UI elements in XML, which enable facial identification using FaceDetector module, and transplanted algorithm from Python to Java,

Online Multi-Pose Face Recognition Summer Research Intern
Department of Computing, The Hong Kong Polytechnic University Aug. 2020 – Oct. 2020

- Built the multi-Pose face recognition system based on Retinaface and finetuned Inception resnet with Python and **PyTorch**, and accelerated deep learning training using PyTorch with **CUDA**
- Combined Euclidean distance with new generated pose information in multi-pose angle, reducing the unmatched distance, and fitted for the imbalance dataset
- Tested the system on private Poly-U database, which contained **18**+ individuals taken from **3** distances, by generating genuine pairs and imposter pairs, and analyzed the statistical results by computing EER (Equal Error Rate), which received **6.95%**, with ROC curve at **FAR = 0.01%**, achieving **99.4% GAR**

Projects

Distributed SurfStore: Fault-tolerant Cloud-based File Storage System Feb. 2022 – Mar. 202*2*

- Designed the cloud storage service patterned on Dropbox using Go and ensure multiple clients to concurrently interact with the SurfStore service to access a common, shared set of files via **gRPC**
- Implemented SHA-256 hashes to identify unique data block, restoring encrypted file blocks on remote servers, and stored metadata's file in **MySQL**, which enabled back database service
- Optimized SurfStore server by enabling clients' interaction under nodes up condition, without crashed status, which generated fault-tolerant based on RAFT protocol, and avoided undelivered response for clients

Blog Application: SpringBoot/ MySQL-based Web Service Mar. 2021 – Apr. 2021

- Implemented the blog web service with java and developed the **REST**ful API with **MySQL** as database
- Used **JWT** (JSON Web Token) with Login API and secure REST API's using JWT authentication
- Tested REST API's using **Postman** REST Client step by step
- Deployed Spring Boot Blog Application on **AWS** t2.micro instance using **RDS** Service

Related Courses

Principles: Database Systems / Graduate Networked Systems / Recommender System & Web Mining / Parallel Computation / Statistical Natural Language Process