Tianyu Sun

CONTACT INFORMATION

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EDUCATION

University of California, San Diego, La Jolla, CA, USA
M.S., Computer Science, GPA: 3.85 **Sept. 2019 – June 2021(Expected)**

University of Science and Technology Beijing, Beijing, China
B.E., Computer Science **Aug. 2015 – June 2019**

RELEVANT PROFESSIONAL EXPERIENCE

Tencent AI Lab
Research Intern **Dec. 2018 – Aug. 2019**

- Worked on developing a robust and efficient system for generating realistic videos with generative adversarial networks. Proposed a stat-of-the-art face reenactment model. Used PyTorch with a 3-researcher team.
- Participated in Virtual Host project, which aims at generating a virtual host for game streaming and weather broadcasting. Developed modules for face segmentation and alignment. Used NumPy and OpenCV with a 4-engineer team. Module adopted by a million-DAU mobile application.

National Laboratory of Pattern Recognition
Institute of Automation, Chinese Academy of Sciences
Research Intern **June 2017 – Sept. 2018**

- Proposed a method of increasing the accuracy of gait recognition by heightening the frame rate with generative adversarial networks, which achieved a performance comparable to state-of-the-art model with an 8-layer base model. Used TensorFlow with a 4-researcher team. Publication can be seen in *Frame-GAN*.
- Segmented human parts of a large Person Re-ID dataset with more than a million images with DensePose. Extracted features of the images with ImageNet Pre-trained models for further research. Used TensorFlow with a 2-researcher team.

SELECTED PROJECTS

Lego-Serverless Platform

- Developed Lego-Serverless Platform, an event handling and function creation platform for modern serverless services, with a 4-engineer team using Python.
- Responsiable for data pipeline and high-level load balancing. Designed and developed data infrastructure based on Kafka and CouchDB.
- Lego-Serverless provides RESTful API for function and event CRUD. Additional management functions like user authentication and function authorization are supported too. Platform can handle 2,000 QPS based on single-node testing on AWS EC2 instance.

Yelp Camp

- Built a web app from scratch to enable users sharing pictures of camping locations.
- Designed and implemented responsive UIs with Bootstrap. Built backend services constructed in Node.js and MongoDB, in order to deliver a seamless user experience on the platform.
- Designed authentication feature, through which users can sign up with email or login with username and password. A security mechanism is implemented to prevent users to modify posts of other users.

Bear Reading

- Built an online reading platform which enables users to upload, read, translate and modify files.
- Implemented translation API and semantic recommendation system with collaborative filtering.
- Work implemented with Django, Bootstrap, and MySQL with a 3-engineer team.

SKILLS

Frameworks, Databases and Tools
Kafka, Docker, Git, AWS, PyTorch, TensorFlow, OpenCV, MySQL, MongoDB, Spark, Node.js

Programming Languages
Python, C++, C, Golang, JAVA, SQL, Haskell