Wenjing Fan

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Education

University of California, Davis M.S. in Computer Science (GPA 4.0) **Sept. 2019 – Dec. 2020**

Shanghai Jiao Tong University M.Eng. in Electronics and Communication Engineering (GPA 3.7) **2015 – 2018**

Shanghai Jiao Tong University B.S. in Information Engineering (GPA 3.4), Shanghai Outstanding Graduate **2011 – 2015**

Skills and Courses

Programming and tools: C++, Python(Pandas, Scikit-Learn), lua, Java, HTML, Javascript, SQL, Matlab, Tensorflow, Git, Vim, Shell, Junit, Pytest, Docker, Postman, Appium, Latex

Courses: Distributed database, Operating system, Architecture, Computation theory, Programming languages, Machine learning, Deep learning, NLP, Algorithms, Matrix theory, Convex optimization

Experience

Bytedance Inc. **Mountain view, U.S.**

Software Engineer Intern (C++, lua) **Jun. – Sept.2020**

- Integrated building segmentation and GPU inpainting algorithms into SDK, accelerated video effects on smartphones.
- Wrote shader and Lua scripts for testing effect stickers and producing several creative effects.
- Provided a customized 3D hand gesture recognition method for interactive engineers, and reduced the development cycle for new hand gestures' implementation and exploration.

YITU Tech **Shanghai, China**

Software Engineer Intern (Java, Python) **Mar. – Jul.2018**

- Built Junit unit-test framework for a face-recognition Android application and designed interface and UI tests. Wrote bash scripts for performing functional, regression, system and integration tests.
- Deployed Jenkins Continuous Integration for automated building and testing projects.
- Improved test framework based on Pytest, wrote HTTP-API test cases.

MIN Group in Shanghai Jiao Tong University **Shanghai, China**

Traditional DNA Sequence Compression (C++) **Mar. – Dec.2016**

- Proposed and implemented a two-pass framework to compress DNA with reference sequences, taking advantage of and modifying FM-index algorithm and non-sequential context models.
- Gained 213-fold compression ratio tested on Korean genome datasets, more than 176-fold (SOTA).
- Published paper Complementary Contextual Models with FM-index for DNA Compression on IEEE Data Compression Conference 2017.

Selected Project

Playing Pong with Deep Q-Network (Python) **May. – Jun.2020**

- trained a deep Q-network which could sample from replay buffer and learn policy to optimize the reward.
- Visualized and analyzed the trained DQN using dimension reduction methods.

Raft Variant Implementation on ExpoDB (C++) **Oct. – Dec.2019**

- Designed and implemented Raft variant with message transfer and leader election.
- Utilized ExpoDB as platform and reused its infrastructure components, such as socket-based message transferring, cryptographic messages validation and message batching.
- Used Docker to launch a server cluster and one client for testing.

Action Recognition Based on Temporal and Spatial Feature Fusion (Python) **Mar. – Jul.2019**

- Designed and implemented a light-weighted fusion network for video action recognition.
- Extracted features based on Bi-LSTM for 3D-skeletons and CNN for one chosen RGB frame.
- Conducted experiments on NTU-RGBD and SYSU datasets. Achieved similar accuracy to SOTA but faster.