Iris (Chui Yi) Liu

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EDUCATION

- **University of Southern California** — Los Angeles, CA
  Master of Science in Computer Science; CGPA: 3.85/4.0 — *Jan. 2020 – Expected Dec. 2021*
- **City University of Hong Kong** — Hong Kong
  Bachelor of Science in Computer Science; Dean's List; Class President — *Aug. 2013 – July. 2017*

PROGRAMMING SKILLS

- **Languages**: Python, Javascript, C++, SQL, HTML and CSS, Bash, and Latex
- **Frameworks & Tools**: Pytorch, Tensorflow, Keras, Numpy, OpenAI Gym, React, AWS(EC2, S3), MongoDB, MySQL, D3.js
- **DevOps Tools**: Docker Compose, Git, Jenkins, Selenium, Ansible

EXPERIENCE

- **University of Southern California** — Los Angeles, CA
  Research Assistant — *Jun 2020 - Present*
  - **Garage**: https://github.com/rlworkgroup/garage is an open source software toolkit for developing and evaluating reinforcement learning algorithms. Implement TD3 in PyTorch; Improve and benchmark off-policy algorithms.
- **City University of Hong Kong** — Hong Kong
  Research Assistant — *May. 2019 – Dec. 2019*
  - **Fault-tolerant neural networks**: Experimented with fault-tolerant CNNs in real-time invertible grayscale image applications.
  - **Workflow**: Setup and maintained Nvidia GPU Clusters to expedite high-computing and deep learning researches.
- **Imsight Medical Technology** — Hong Kong
  Software Engineer — *Aug. 2017 – Apr. 2019*
  - **Whole-Slide Imaging Applications**: Designed and built cloud-based web viewer, annotation and automatic reporting tools for large-scale high dimensional medical images (Histopathology, Ophthalmology) using OpenSeadragon, OpenCV, QT; Built Python backend using RESTful APIs, Flask Framework and MongoDB.
  - **Computer Vision**: Developed algorithms for image processing, detection, segmentation of retinal images to identify signs of diabetic retinopathy and glaucoma.
  - **Algorithm Integration & Deployment**: Integrated deep learning algorithms to web-based applications and optimized parallel CPUs and GPUs utilization for fast (< 20sec per image) medical image analysis. Deployed applications remotely in 4 top tier hospitals in Mainland China and Hong Kong.
- **City University of Hong Kong** — Hong Kong
  Undergraduate Researcher — *Feb. 2017 – Jun. 2017*
  - **Rumor Source Detection**: Developed a simulation program on inferring source of a rumor (information diffusion) in a social network graph.

PROJECTS

- **Race On**: https://github.com/irisliucy/race-on A hardware-software development, which assembled a car from scratch and programmed the control algorithm, of a self-driving car for racing.
- **Short Text Classification with Deep Neural Networks**: Github, Pdf Final-year project that proposed LSTMs as temporal network to extract textual features for SVMs on extreme short text classification. Awarded Best Student Academics Paper, 2017.
- **Man2Hero**: https://github.com/irisliucy/Man2Hero A single-player AI game implemented with rule-based fuzzy logic and finite state machine logic in JavaScript.

AWARDS AND HONORS

- 2nd runner up of "Race On" self-driving car competition, University of Southern California — *Spring 2020*
- 1st runner up of Zoohackathon, Hong Kong — *2019*
- Participant of MICCAI Retinal Fundus Glaucoma Challenge (REFUGE), Finalist (Top 10 team) — *2018*
- 2nd runner up of Microsoft Imagine Cup, World Quarterfinals (Hong Kong Region) — *2016*