Yuqiong Li

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Experience

Software Engineer, Machine Learning Infrastructure **Mountain View, CA**
Nuro *Feb 2021 - Jan 2023*

- Maintained and improved the efficiency, scalability, and reliability of a distributed training system for large scale reinforcement learning experiments: feature engineering; improving machine utilization; system health monitoring and tracking; AutoML (GCP neural architecture search) integration.
- Streamlined machine learning training and evaluation process on cloud using Airflow, Kubernetes and Terraform. Built a comprehensive continuous monitoring and testing system with Jenkins, BigQuery, Retool and Slack to mitigate model regressions. Improved simulation based unit tests runtime by 80%.
- Identified and improved cloud resource under-utilization, achieving $300k+ annual savings for model training.

Software Engineer, Computer Vision **Santa Clara, CA**
VinSmart USA *Sep 2020 - Dec 2020*

- Responsible for the lane segmentation and 3D object localization onboard modules for autonomous vehicle prototyping and demonstration events. Benchmarked vendor SoC solutions (e.g. Mobileye Q4).

Software Engineer, Deep Learning **Fremont, CA**
Inceptio Technology *Aug 2019 - Jul 2020*

- Designed and delivered the lidar detection module on vehicle middleware using C++ for real-time inference.
- Implemented a smart data pipeline, including storage, parsing, auto curation, analysis and visualization.
- Implemented deep-learning-based 3D object detection algorithms using TensorFlow and TensorRT. Optimized training speed (-20%) and accuracy with TFRecord, Cython, distributed SGDs. Model profiling with C, CUDA, cuDNN and PyTorch.

Research Engineer **New York City, NY**
AI & Civil Engineering Lab, NYU *Dec 2018 - May 2019*

- End-to-end design and implementation of a geographic 3D city database using spatial ETL tools and PostgreSQL. 3D deep generative model experiments with Pytorch and CUDA.

Data Science Intern **New York City, NY**
PepsiCo *Jun 2018 - Aug 2018*

- Built an advertisement campaign analysis tool with Pandas, Spark, MS SQL and AWS. Deployed it to production and presented to the New York office leadership team.

Publications

RealCity3D: A Large-scale Georeferenced 3D Shape Dataset of Real-world Cities
Li, Y, Zhao, H., Yu, Z., Feng, C., CVPR Workshop Oral Presentation, 2019

Education

New York University **New York City, NY**
MS in Data Science *Sept 2017 - June 2019*

The University of Hong Kong **Hong Kong**
BSc in Statistics, First Class. MPhil in Sociology *Sept 2012 - May 2018*

Skills

- **Language:** Python, C++/C, CUDA, R
- **Machine Learning Platform:** PyTorch, Tensorflow, TensorRT. Airflow, Kubernetes, Terraform
- **Others:** OpenCV, OpenGL. MPI. Spark, Hadoop, PostgreSQL, MySQL, MongoDB.