Experience

Machine Learning Engineer

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 on cloud using Airflow, Kubernetes and Terraform. Built a continuous monitoring and testing system with Jenkins, BigQuery, Retool and Slack to mitigate model regressions through dashboard and notifications. Improved simulation based test runtime by 80%.
- Identified and improved cloud resource under-utilization, achieving \$300k+ annual savings for model training.

Software Engineer, Deep Learning

Inceptio Technology

Fremont, CA

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.

Deep Learning Research Engineer

AI & Civil Engineering Lab, NYU

New York City, NY

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. Top conference presentation.

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.

Quantitative Developer Intern

Hong Kong

Junson Capital

May 2017 - Jul 2017

- Backtested asset allocation strategies using VBA, Bloomberg API, Python Numpy and Pandas.

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.