Christopher Ho

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EXPERIENCE

Undergraduate Researcher, Computational Vision Lab @ UC Irvine June 2021 — Present / Irvine, CA

- Assisting Prof. Charless Fowlkes with computer vision research for dynamic depth estimation of videos
- Fine-tuned transformer models on InteriorNet scenes with distributed multi-GPU training schemes

Software Engineer Intern @ Apple June 2021 — Present / Sunnyvale, CA

- Created RESTful middleware for Zoom, Jamf apps within Claris Connect to expand the product into the education sector

Undergraduate Researcher, Shiraiwa Group @ UC Irvine September 2020 — June 2021 / Irvine, CA

- Researched and optimized approximation experiments for atmospheric chemical reactions with Prof. Manabu Shiraiwa
- Implemented neural architectures to simulate time-evolving chemical reactions 350× faster than the previous model
- Applied variational inference methods to find values for chemicals' physical properties from previous empirical data

Machine Learning Engineer Intern @ Stream Engine September 2020 — April 2021 / Irvine, CA

- Built regression models that predict time-series audience statistics for livestream events to establish a reliable product
- Parallelized collection pipelines for streaming analytics to automate data ingestion for hundreds of concurrent streams

Software Engineer Intern @ Apple June — September 2020 / Santa Clara, CA

- Developed a recommendation system to suggest workflow apps and actions based on previously collected data
- Revamped the Claris Connect app's UI/UX from design sketches, improving presentation and usability

TECHNICAL SKILLS

Programming Languages: Python, C/C++, Java, SQL, JavaScript, LaTeX
Environments and Libraries: Git, Jupyter, PyTorch, Pyro, OpenCV, TensorFlow, Docker, Kubernetes
Verbal Languages: Native English, Conversational Cantonese Chinese, Mandarin Chinese

EDUCATION

University of California, Irvine Irvine, CA
B.S. Computer Science and Engineering, Minor in Statistics — 3.88/4.0 Expected June 2022

Relevant Coursework: Computer Vision, Medical Imaging, Deep Learning, Machine Learning, Probability and Statistics, Signal Processing, Data Structures, Algorithms, Database Management, Quantum Computing

PROJECTS

Using RGB Videos to Predict ECG • Python, TensorFlow, OpenCV

- Predicted a patient's ECG waveform given an RGB video of their face, focusing on minute physiological differences
- Applied transfer learning from ImageNet computer vision models with several image pre-processing techniques

TSTimeTable • Python, MySQL, React

- Scraped TournamentSoftware site for information on tournament matches and added various filters for coaches' use
- Supported real-time updates for match logistics by connecting MySQL database to React display with Flask API backend