


# CHRISTOPHER HO

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## EXPERIENCE

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**Research Assistant @ UC Irvine** September 2020 — Present  
Machine Learning, Computational Chemistry Irvine, CA

- Created deep architectures to model atmospheric experiments up to  $350\times$  faster than the current SoTA computation model
- Researching MCMC sampling and optimization methods to quickly determine chemicals' physical properties

**Machine Learning Engineer Intern @ Stream Engine** September 2020 — Present  
Machine Learning, Data Science Irvine, CA

- Built regression models using time-series data to predict viewer statistics for broadcasts, livestreams, and social media
- Implemented custom metrics for brand classification using OpenCV to quantify value of advertisements in streams
- Optimized scripts for data collection and preprocessing from social media sites, minimizing requests and overhead time

**Software Engineer Intern @ Apple** June — September 2020  
Full-Stack Development Santa Clara, CA

- Developed a recommendation system in Python to suggest workflow apps and actions based on popularity in user data
- Revamped Claris Connect UI from sketches using JS, React and Node.js libraries, improving presentation and usability
- Coordinated with team members using Agile practices to distribute Jira tasks and push bi-weekly app updates

**Tournament Director @ American Red Cross Charity Tournament** September 2016 — September 2018  
Management, Leadership Union City, CA

- Planned, publicized, and managed tournament desk during a one-day badminton tournament for 3 years
- Raised \$2,000 in 2016, \$2,500 in 2017, \$6,000 in 2018 for the American Red Cross

## TECHNICAL SKILLS

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**Programming Languages:** Python, C/C++, JavaScript, MySQL, Java,  $\text{\LaTeX}$

**Environments and Libraries:** Git, Jupyter, sklearn, TensorFlow, PyTorch, OpenCV, React.js, Cypress

**Verbal Languages:** Native English, Conversational Cantonese Chinese, Mandarin Chinese

## EDUCATION

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**University of California, Irvine** Irvine, CA  
**B.S. Computer Science and Engineering, Minor in Statistics** September 2018 – June 2022  
GPA: 3.831/4.0

**Relevant Coursework:** Statistical Machine Learning, Deep Learning, Computational Vision, Probability and Statistics, Artificial Intelligence, Data Structures, Algorithms, Database Management, Quantum Computing

## PROJECTS

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

- Predicted a patient's ECG waveform, given an RGB video of their face for AICure's Kaggle competition and CS 172B
- Employed several preprocessing techniques using OpenCV to focus training on different facial features in video data
- Trained various CNN architectures from ImageNet computer vision models to recognize imperceptible facial changes

**TSTimeTable** • Python, MySQL, React

- Scraped TournamentSoftware site for match information, including match times, player names, and club affiliations
- Designed relational databases using MySQL to store relations between information, using Redis for faster accesses
- Implemented UI components in React that respond to real-time updates on TournamentSoftware through Flask API