Tony Tong

(949) 247-1233 ◇ daohangt@uci.edu ◇ Irvine CA, 92612 ◇ tdhttt.com ◇ TDHTTTT

EDUCATION

University of California, Irvine — Class of 2020
B.S. Physics — Senior
B.S. Computer Science and Engineering

EMPLOYMENT

CERN — Geneva, Switzerland
ATLAS Associated Member — Jul 2019 - Present

- Working on electron identification at ATLAS experiment; distributing the simulation code on various clusters
- Developing deep neural networks with Keras and PyTorch for both high and low level features of the jet images
- Building docker and singularity images to ease the process of using different frameworks on different clusters

Fixstars Solutions — Irvine, CA
Deep Learning Engineer Intern — Apr 2019 - Jun 2019

- Developed multiple deep neural networks using PyTorch and distributed them on GPU clusters (code)
- Computed various measurements in CARLA simulator with Python and C++; developed data collection CLI
- Implemented affordance learning in urban autonomous driving; tested conditional learning approach

Department of Physics and Astronomy — Irvine, CA
Tutor, Full Stack Developer — Jul 2018 - Oct 2018

- Maintained a Canvas-like application on GCP which was used by 300+ students the following quarter
- Developed the Web UI under React framework; integrated third party applications such as Quill
- Improved the security by discovering and fixing a vulnerability of the legacy system caused by a hidden API
- Edited and solved over 500 undergraduate level Physics problems using Mathematica and LaTeX

RESEARCH

Satellite Hydrology Bits Analysis And Mapping — Irvine, CA
Group Leader, Undergraduate Researcher — Jan 2018 - Dec 2018

- Computed hydrological anomaly by analyzing data from GRACE satellites with Dr. Cedric H.David(JPL, NASA)
- Led a team of four, gave weekly assignments and feedback (sample), hosted meetings and coordinated tasks
- Added cross-platform compatibility by Docker and native scripts based on OS (Linux/Windows/OS X)
- Improved the CI process by supporting py2/3 compatibility, maintaining dependencies and writing test scripts

Electron Identification - ATLAS Research — Irvine, CA
Undergraduate Researcher — Jul 2018 - Present

- Worked with Prof. Daniel Whiteson on electron identification; added Windows support for MadGraph5
- Set up Linux clusters to generate high volume of particle collision simulation data with MG5+Pythia+Delphes
- Wrote multiple Python and C++ scripts to analyze and visualize the simulation data with ROOT

ACCOMPLISHMENTS

Ranked #19 in IEEExtreme Competition, U.S. (top 5% worldwide out of 4049 teams) — Oct 2018
Eta Kappa Nu Member (academic honor society) — Dec 2018
Completed 92 Units with 3.92 GPA in freshman year (Dean's Honors List) — Sep 2016 - Jul 2017

PROJECTS

HealthHelper: IoT device monitoring and encouraging workout with Arduino and Raspberry Pi
Scheca: Web app to visualize UCI course schedule and send a email notification when the course is available
MESA: React-native app to evaluate students' mental health and recommend activities to cheer them up

RELEVANT COURSES AND SKILLS

Courses: Neural Networks, Machine Learning, Advanced Algorithms, Computer Network, Signal Processing, Particle Physics, Relativity & Blackhole, Experimental Physics, Quantum Mechanics
Skills: Data Analysis, ROOT, CI (Travis+AppVeyor), Web Dev, React, GCP, Docker, PyTorch, Haskell