Ka Wai (Karry) Wong • +1 (530) 574 3799 • ucdwong@ucdavis.edu
A computational math PhD, an avid and competitive coder, and a multilingual world traveler with great passion and desire to transition into a role of software/Algorith/ML engineer and data scientist; have an extremely strong drive and innate ability in facing challenges; strive to deliver innovative engineering solutions and reliable data-driven analysis using machine learning

Professional Experience: Oct 2021 - now
Postdoctoral researcher, Lawrence Livermore National Laboratory, California

- Achieved first-ever 3D electron temperature measurements of burning plasmas at the National Ignition Facility via limited-view x-ray emission tomography and 3D geometry modeling of nuclear fusion hotspot.
- Developed robust 3D reconstruction algorithms for nuclear fusion hotspot, which can be used to enhance data-driven analysis such as Bayesian inference and Markov-Chain Monte-Carlo method on experimental physics data by using python library emcee and the open-source dataset on nuclear fusion experiment simulations
- (Dec 2019 - Jun 2021 as Graduate Student Researcher) Significantly increased accuracy in x-ray emission measurement of nuclear fusion experiments by developing robust image processing algorithms to analyze 100+ 2D x-ray images, which enabled 3D reconstruction using MATLAB image processing toolbox, work featured in Student SLAM

Jun. - Sept. 2021
Software Engineer Intern, Autodesk, San Francisco, California.

- Successfully computed of solid mechanical bodies filled with lattices/gyroids structures for 3D printing by designing and developing a stochastic sampling algorithm (C++) in additive manufacturing features for CAD tool Fusion360
- Solved 3D geometry problems of solid models defined by implicit modeling and B-rep

Jul. - Sept. 2019
Software Engineer Intern, Rohde & Schwarz USA, Beaverton, Oregon.

- Successfully located and fixed 10+ critical bugs in existing object oriented programming codebase (Python/C++, 3000+ lines) by designing and implementing automated unit testing cases in WiFi technology (various WLAN 802.11 standards)
- (Apr-Sept 2016, worked as full-time software testing engineer in Munich headquarters) Designed and developed automated unit test cases for Wideband Callbox on 4G LTE

Summers 2017/18/19
Graduate Student Researcher, Center for Educational Effectiveness, University of California, Davis

- Helped students from underrepresented minority groups and with social disadvantages achieve academic success by building up and analyzing large dataset containing 10+ different performance metrics of 5,000+ students placed in remedial learning using software ALEKS;
- Helped more than 1200 college students master calculus and advanced math topics in 15 different courses over 5 years by being an excellent communicator and a great educator, selected as an Outstanding Graduate Student Teaching Award recipient out of 2000+ teaching assistants

Programming Languages
Python (advanced), C++ (advanced), MATLAB (expert), R, Fortran (basics)
Leetcode, Machine Learning (TensorFlow & PyTorch) on Coursera & Kaggle
Fluent – English, German, Mandarin; Native – Cantonese; Conversational – Hebrew

Education
Ph.D. Applied Math (Sept 2021, GPA 3.9) University of California, Davis
MSc Math (2015) TUM in Germany; BSc Math (2011) HKUST in Hong Kong

Links:
<https://github.com/>, <https://karrywong.github.io/>, <https://leetcode.com/karrywong/>