Ka Wai (Karry) Wong • +1 (530) 574 3799 • ucdwong@ucdavis.edu • www.linkedin.com/in/karry-wong/
Computational math PhD, avid and competitive coder, and multilingual professional in software engineering and data science. Strong drive and innate ability in facing challenges and to deliver impactful engineering, data, and ML solutions.

Professional Experience:

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

- Achieved first-ever 3D electron temperature measurement of burning plasmas via limited-view x-ray emission tomography and 3D geometry modeling of nuclear fusion hotspot.
- Developed noise-robust 3D reconstruction algorithms for nuclear fusion hotspots of arbitrary shapes and geometry, which can 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) 2x higher accuracy in x-ray emission measurement of nuclear fusion experiments by developing image denoising algorithms via algebraic reconstruction techniques to analyze 100+ 2D x-ray images, which enabled 3D reconstruction using MATLAB image processing toolbox, work featured in 3-min Student SLAM video

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

- Successfully computed volume 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 (20k rows in Excel) 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/karrywong>, <https://karrywong.github.io/>, <https://leetcode.com/karrywong/>