

Alvin Tan

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Education

University of California, Berkeley Doctor of Philosophy in Electrical Engineering	2020 - Expected 2025 Berkeley, CA
Northwestern University Bachelor of Science in Computer Engineering, Economics, and Math GPA: 3.99/4.00 Honors: <i>summa cum laude</i> , <i>Tau Beta Pi Alumni Chair</i> , <i>Eta Kappa Nu</i> Awards: <i>2020 ECE Outstanding Graduating Senior</i> , <i>2018 Goldwater Scholarship (HM)</i> Relevant Coursework: <i>Probability and Statistics</i> , <i>Real Analysis</i> , <i>Abstract Algebra</i> , <i>Machine Learning</i> , <i>Economics of Risk and Uncertainty</i> , <i>Econometrics</i> , <i>Corporate Finance</i>	Graduated 2020 Evanston, IL

Skills

Proficient in Python, Matlab, C, HTML, CSS, JavaScript, Verilog, VHDL
Experience with SQL, Stata, microcontrollers, high-performance computing, and cloud computing

Research and Professional Experience

Hale Ao o Ka Moamoa Lab <i>Undergraduate Researcher</i>	April 2018 - June 2020 Evanston, IL
<ul style="list-style-type: none">Conducted a 30-paper literature review and identified a novel research space for using microbial fuel cell power output to infer ambient conditions in a wireless sensor networkCollected and analyzed microbial fuel cell power output data with a grad student in biologyPivoted to theoretical system analysis with SPICE circuit models due to a worldwide pandemic	
Oak Ridge National Laboratory <i>High-Performance Computing Intern</i>	June 2019 - Aug 2019 Oak Ridge, TN
<ul style="list-style-type: none">Optimized and parallelized spectroscopic data analysis in Python on high-performance computing resources after converting from Matlab, resulting in a 150x increase in throughputProduced two abstracts (one short, one long), one project report, and one poster on the resultsCompeted in a data-thon on a team of four by parsing multi-GB crystallography datasets into a datastream to feed into a neural network	
AI Applied Research Lab, Ford Motor Company <i>Artificial Intelligence Intern</i>	June 2018 - Sept 2018 Taylor, MI
<ul style="list-style-type: none">Prototyped, evaluated, and documented four artificial intelligence projects exploring crowdsourcing, facial recognition, object recognition, and natural language processingGained experience with Python, PHP, machine learning, Raspberry Pi, and MySQL databases	

Course Projects

Northwestern University <i>Microprocessor System Design</i>	April 2019 - June 2019 Evanston, IL
<ul style="list-style-type: none">Developed a multiplayer remote pong game with a partner using MSP430 microcontrollersGained experience programming microcontrollers in C, manipulating peripherals, transmitting and receiving messages through radios, and parsing through device datasheets	