

## Yuan Chang

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CONTACT INFORMATION	1659 Drew cir Davis, CA 95618	(530) 760-6690 merchang@ucdavis.edu
EDUCATION	<b>University of California, Davis, CA</b> B.S. Computer Science, Sept 2018 - Jun 2022 <ul style="list-style-type: none"><li>• Minor in Mathematics.</li><li>• UC GPA: 3.903, <b>Major GPA: 3.950.</b></li><li>• Dean's honors list of Winter and Fall of 2019, Winter of 2020, Spring of 2021.</li></ul>	
PROGRAMMING LANGUAGES AND SKILLS	Proficient: C/C++, Python, L <sup>A</sup> T <sub>E</sub> X, Maple, R, Unix Familiar/Beginner: MIPS Assembly, Java, MATLAB, Mathematica, RISC-V Assembly, Scala Experienced: Object Oriented Programming, Team Programming Languages: Chinese(Native), English(Fluent), French(Beginner)	
RELEVANT COURSEWORK	MAT 165A - Computational Algebra, Groenber Basis, Applied abstract algebra MAT 145 - Combinatorics, Graph Theory, Optimization ECS 150 - Multi-threaded programming, System programming ECS 122A - Advanced algorithm analysis, Graph algorithms, Dynamic programming ECS 154A/B - Computer Architecture, Parallel architecture, Memory architecture	
EDUCATION & EXPERIENCE	<b>Davis Senior High School</b> Teacher's Assistance Fall 2019 <ul style="list-style-type: none"><li>• Teach along with Mr.Harvey's robotics class</li><li>• Help program autonomous and remote controlled robots in C/C++ language.</li><li>• Clerical tasks such as taking attendance and grading course works.</li></ul> <b>International Family Union</b> Teaching Associate Summer 2020 - 2021 <ul style="list-style-type: none"><li>• Teaching in Computer Science.</li><li>• Design and taught areas such as Unix, C++, algorithms and data structures.</li><li>• Introduce advanced data structures with memory management and recursion in C++.</li></ul>	
RESEARCH PAPERS AND PROJECTS	<b>Robotic Arm Project (2020)</b> <ul style="list-style-type: none"><li>• Study of a specialized two segments robotic arm with computational algebra.</li><li>• Analysis of many real life robotic arm problems such as kinematics singularity and reversed kinematics problems.</li><li>• Calculations made using Maple.</li><li>• Highlights the integration of computer and mathematics.</li></ul> <b>RSA Encryption and Modular Arithmetic (2019)</b> <ul style="list-style-type: none"><li>• Insight look into RSA encryption through the lens of computer science and mathematics</li><li>• Provided several detailed mathematical proof for the theorems such as the Fundamental Theorem of Arithmetic and Euler's Phi function.</li></ul>	

### **Empirical Analysis of Sorting Algorithms (2018)**

- My own implementation of Bubble, Insertion, Merge and Quick sort in Java.
- Analysis of the time and space complexity of above algorithms, along with numerical data from simulations.
- Wrote in High school, served as an first attempt to write research paper.