

Yuan Chang

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EDUCATION	University of California, Davis, CA B.S. Computer Science, Sept 2018 - Jun 2022 <ul style="list-style-type: none">• Minor in Mathematics.• UC GPA: 3.9/4.0, Major GPA: 3.950.• Algorithm design and analysis, Computer Architecture, Scientific Computation, Artificial Intelligence, System programming, Regression, Optimization.	
PROGRAMMING LANGUAGES	Proficient: C/C++, Python, \LaTeX , MATLAB, R, Unix, Shell script, HTML Familiar: Rust, Swift, Clisp, Prolog, Perl, Java, Maple, RISC-V	
INTERNSHIP & EXPERIENCE	UC Davis Applied Mathematics Summer Research Research student June 2021 - Feb 2022 <ul style="list-style-type: none">• Study both theoretical Ramsey Theory and computational methods.• Modify and write scripts to aid computation.• Using Boolean algebra(SAT) to significantly reduce the cost of computation.• Research under the supervision of Prof. Jesús De Loera and William Wesley. International Family Union Teaching Associate Summer 2020 - 2021 <ul style="list-style-type: none">• Teaching in Computer Science.• Design and taught areas such as Unix, C++, algorithms and data structures.• Introduce advanced topics such as dynamic memory management and recursion.	
PERSONAL PROJECTS & RESEARCH PAPERS	Digit Recognition with MNIST Databset of Handwritten Digits (2022) <ul style="list-style-type: none">• Analyze and implement Centroid and PCA algorithms in MATLAB for hand-written digit recognition.• Training data set over 60,000 digits and testing data set over 10,000. Achieved overall success rate of around 85%. Computations with Rado numbers and degree of regularity (2021) <ul style="list-style-type: none">• Advancements in terms of Rado Numbers and degree of regularity.• Research paper submitted to 2022 ISAAC conference.• Co-author with Professor Jesús De Loera and William Wesley. Robotic Arm Project (2020) <ul style="list-style-type: none">• Study of a specialized two segments robotic arm with computational geometric algebra.• Analysis of many real life robotic arm problems such as kinematics singularity and reversed kinematics problems.	

CONFERENCE &
TALKS

UC Davis Undergraduate Research Conference 2021

Title: Ramsey Theory and Automatic Theorem Proving

- Present the background and theory on Ramsey Number research.
- Live demo session showing the entire system and experiment process.
- Promote mathematics and computer science research at the undergraduate level.

The Link to the presentation slides in \LaTeX .

LANGUAGES

Native: Chinese, *Fluent:* English, *Beginner:* French