Yuan Chang

Contact Information & Websites

1659 Drew cir
Davis, CA 95618
(530) 760-6690
merchang@ucdavis.edu
https://itis2010me.github.io/itis2010me/
https://www.linkedin.com/in/yuan-chang-26b425203/

Education

University of California, Davis, CA

B.S. Computer Science, Sept 2018 - Jun 2022

- 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

- 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

- 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)

- Analyze and implement Centroid and PCA algorithms in MATLAB for handwritten 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)

- 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)

- 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.