

# Kun Wang

MACHINE LEARNING RESEARCHER · SOFTWARE ENGINEER

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## Education

### University of California San Diego

Bachelor of Science, Mathematics and Computer Science

- GPA: 3.976/4.000 (Provost's Honors)
- Minors in Economics

San Diego, California, U.S.

Sept 2021 - Current

## Research Experience

### Rose Spatio-Temporal lab, UC San Diego

Undergraduate Researcher with Prof. Rose Yu and Prof. Yian Ma

- Spearheaded the development of novel Causal Discovery algorithms for analyzing Spatio-Temporal data, contributing to advancements in machine learning applications in scientific research.
- Utilized Pytorch Lightning to implement deep learning causal inference models, contributing to research paper under review for publication in top-tier conferences(ICML), leading the authorship of a paper targeting submission to a top-tier machine learning conference(NeurlPS).
- Awarded the HDSI Undergraduate Scholarship in recognition of a breakthrough in machine learning research, demonstrating potential applications in climate modeling and predictive analytics.

San Diego, California, U.S.

May 2023 - Current

### Center for Visual Computing, UC San Diego

Undergraduate Researcher with Prof. Manmohan Chandraker and Ravi Ramamoorthi

- Contributing to the development of a novel Vision-Language Processing framework to optimize layout generation and 3D understanding, significantly improving spatial understanding by integrating advanced Prompt Engineering techniques (targeting Siggraph Asia).
- Collaborated with a cross-disciplinary team to fine-tune Large Language Models for enhanced rendering capabilities, contributing to groundbreaking advancements in computer vision and natural language processing.
- The research is sponsored by Qualcomm's Innovation Fellowship, led by Kunal Gupta

San Diego, California, U.S.

March 2023 - Current

### The Slade Lab, UC San Diego

Undergraduate Research Assistant

- Implemented extensive probabilistic model on simulating aerosol transmitting in different indoor settings
- Extensive research and model building done in Python and MATLAB regarding trends in aerosol spreading of respiratory diseases under various environments

San Diego, California, U.S.

February 2022 - May 2023

## Work Experience

### Computer Science Engineering Department, UC San Diego

Computer Science Engineering Instructional Assistant/Tutor

- Undergraduate Instructional Assistant for CSE 152A, Introduction to Computer Vision
- Provided one-on-one and group tutoring to undergraduate students, addressing questions related to course materials, assignments, and concepts in computer vision.
- Profound understanding of computer vision fundamentals, including image formations, feature extraction, and object detection/segmentation.

San Diego, California, U.S.

September 2023 - Current

### Mathematics Department, UC San Diego

Mathematical Instructional Assistant/Tutor

- Undergraduate Instructional Assistant for Linear Algebra and Differential Equations
- Math tutor for calculus and MATLAB
- Extensive experience in teaching on mathematical programming

San Diego, California, U.S.

September 2022 - June 2023

### O-STEM: Queer in AI

Volunteer Organizer

- Coordinated with members to ensure diverse and inclusive representation in panels and discussions at UCSD
- Implemented strategies to increase engagement within the Queer in AI community on campus
- Facilitated collaborations with allied organizations(Women in STEM) to advocate for equitable practices in AI research and industry

Remote/San Diego, California, U.S.

Winter 2024

## Skills

**Programming** Python (PyTorch, Tensorflow, NumPy, Scikit-learn. etc.), R(ggplot2), C/C++, HTML/CSS, JavaScript, Java, SQL, PHP.

**Miscellaneous** Linux, Shell (Bash/Zsh), Dockers, AWS S3, Kubernetes,  $\LaTeX$ (Overleaf/R Markdown), Microsoft Office, Git.

**Soft Skills** Research, Teamwork, Time Management, Problem-solving, Engaging Presentation, Documentation.

**Languages** English, Mandarin

# Achievements

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2023	<b>HDSI Undergraduate Scholarship</b> , Halicioglu Data Science Institute	<i>UCSD</i>
2023	<b>First Place</b> , Taxi travel time prediction Kaggle Competition	<i>UCSD</i>
2022	<b>327/340</b> , Graduate Record Examinations (GRE)	<i>California, U.S.</i>
2021	<b>Cum Laude</b> , Rutgers Preparatory School	<i>New Jersey, U.S.</i>
2020	<b>7/15</b> , American Invitational Mathematics Examination(AIME) Exam	<i>New Jersey, U.S.</i>
2020	<b>126/150</b> , American Mathematics Competition(AMC 12) Exam	<i>New Jersey, U.S.</i>
2019	<b>Third Place</b> , New Jersey Physics Bowl	<i>New Jersey, U.S.</i>
2017	<b>First Place</b> , International Rubik's Cube Championship Youth Category	<i>Kaosiung, Taiwan</i>