

EDUCATION

- **University of Michigan, Ann Arbor** Ann Arbor, MI
Master of Science in Applied Statistics *Aug 2023 – Present*
 - **Courses (Planned for Autumn 2023):** Regression Analysis, Statistical Theory I, Probability Theory, Multivariate Analysis, Nonparametric Statistics, Machine Learning, Applied Stochastic Modeling
- **University of California, San Diego** La Jolla, CA
Bachelor of Science in Applied Mathematics; GPA: 3.7 *Sept 2019 – June 2023*
 - **Courses:** Honors Linear Algebra and Vector Calculus, Abstract Algebra, Galois Theory, Foundations of Real Analysis, Measure Theory, Fourier Analysis, Extremal Combinatorics and Graph Theory, Probability Theory, Stochastic Processes, Mathematical Statistics, Numerical Analysis, Graduate Probability Theory I
- **University of California, San Diego** La Jolla, CA
Bachelor of Science in Computer Science; GPA: 3.7 *Sept 2019 – June 2023*
 - **Courses:** Discrete Mathematics and Combinatorics, Algorithms, Computation Theory, Modern Cryptography, Software Engineering, Operating System, Digital Design, Computer Vision, Natural Language Processing, Artificial Intelligence, Recommender System

RESEARCH INTERESTS

I am broadly interested in **Applied Probability** and in particular fascinated by Markov chains, Markov processes, stochastic algorithms, and their applications in a wide range of areas such as stochastic optimizations.

RESEARCH EXPERIENCE

- **Department of Mathematics, supervised by Professor Yuhua Zhu** UC San Diego
Research Assistant in Interface of PDEs and Machine Learning *Sept 2022 – Dec 2022*
 - Work on gradient-free optimization problems inspired by particle systems
 - Analyze the convergence behavior of stochastic gradient descent
- **Department of Mathematics, supervised by Juno Seong and Srivatsa Srinivas** UC San Diego
Directed Reading in Ergodic Theory with Applications in Number Theory *Mar 2022 – June 2022*
 - Learn basic fundamentals of Ergodic Theory and Dynamical Systems with applications in Number Theory
 - Present a short lecture on Poincare Recurrence Theorem and related applications
- **Department of Mathematics, supervised by Professor Ery Castro** UC San Diego
Directed Reading in Optimization and Statistical Learning *Sept 2020 – Dec 2020*
 - Give presentations on some common Statistical Learning algorithms

TEACHING EXPERIENCE

- **Department of Statistics** UM Ann Arbor
Teaching Assistant of Introduction to Statistics and Data Analysis *Aug 2023 – Present*
 - Hold lab tutorials and review sessions
 - Hold office hours and answer questions from online forums and group work during lectures
 - Prepare and grade labs, homeworks, and exams
 - Prepare academic progress reports
- **Department of Computer Science and Engineering** UC San Diego
Teaching Assistant of Discrete Mathematics and Algorithms *Mar 2021 – Dec 2022*
 - Hold office hours and answer questions from online forums
 - Grade homeworks and exams

- Proofread and prepare solutions for homeworks and exams
- Hold recitations and review sessions

• Department of Computer Science and Engineering

Teaching Assistant of Introduction to Programming

- Hold office hours and answer questions from online forums
- Grade programming assignments
- Proofread course materials

UC San Diego
Sept 2020 – Dec 2020

WORK EXPERIENCE

• Boway Group

Machine Learning Internship

- Fetch experiment data (compositions of alloy, processes, strength of alloy, conductivity) from some papers
- Apply the Random Forest model on cleaned data, and extract features with importances to explain the decision
- Introduce some randomness for multiple possibilities of alloy compositions and cost considerations

Ningbo, China
May 2023 – July 2023

• Donghai Marine Insurance Company Limited

Data Analysis Internship

- Conduct premiums and losses analyses monthly and evaluate against the business plan
- Implement actionable recommendations to improve the results for customers

Ningbo, China
June 2020 – Sept 2020

PROJECT EXPERIENCE

- **Predicting accepted answers for Apple community on StackExchange:** Apply Logistic Regression and Random Forest models with Natural Language Processing techniques to explore the relationship between whether there is an accepted answer and posted dates, and tags.
- **Sentiment Analysis on Financial Data:** Develop Bidirectional RNN-LSTM, Bag-of-Bigrams and BERT models to predict if the sentiment included in the comments are actually positive, neutral, or negative.
- **AI player for 2048:** Implement a game AI for the 2048 game based on a depth-3 game tree and the expectimax search algorithm.
- **Maze solver:** Implement a Q-learning algorithm applying rewards and penalties to teach a learning agent how to navigate through a maze and iteratively updating a table with scores to optimize the learning process.

HONORS & AWARDS

- **First place** in advanced track Datahacks, UC San Diego *April 2022*
- **College Provost Honors Student**, UC San Diego *2019, 2020, 2021, 2022*

SKILLS

- **Programming Languages:** Python, R, MATLAB, Java, C/C++
- **Tools & Frameworks:** Jupyter Notebook, L^AT_EX, Markdown, git, Linux
- **Languages:** Chinese (Native speaker), English (Fluent), Spanish (Beginner)