

Tianle (Steven) Chen

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EDUCATION

Duke University

Master of Science: **Statistical Science**

- Admitted, matriculation Fall 2025

Durham, NC

August 2025 – May 2027

University of Wisconsin-Madison

Bachelor of Science: **Mathematics, Statistics**

- GPA: **3.877/4.0**, Honors: **Dean's List** for 4 Semesters, **Successful Participant Award** for COMAP 2024(Advisor: Saverio Spagnolie, Amy Cochran)

Madison, WI

September 2021 – December 2024

PUBLICATION

- Chunmei Li, Tianle Chen, Huimin Chen, etc. [Temporal Trends in Colorectal Cancer Incidence and Case Numbers among Individuals Aged 45-49 in the US During 2001-2019](#)

RESEARCH & ACADEMIC PROJECTS

Madison Experimental Mathematics Lab: Numerical Study of Kakeya Maximal Inequalities

Madison, WI

Research Assistant supervised by Prof. Terence Harris

September 2024 – December 2024

- Conducted an in-depth review of the Kakeya maximal function conjecture, focusing on 3D scenarios
- Designed and implemented numerical simulations for 3D tubes using spatial hashing techniques
- Adapted methodologies to refine implemented Greedy algorithms based on resolved conjecture cases
- Utilized MATLAB and Python (NumPy, SciPy, Matplotlib) for complex geometric computations
- Documented and tested all methods to ensure simulation accuracy against known theoretical outcomes

Gender and Racial/Ethnic Disparities of Early-onset Colorectal Cancer by Anatomical Sites, Histological Types, and Disease Stages in the United States during 2001-2019

Remote

Research Assistant supervised by Shihua Wang, Ohio State University

June 2022 – August 2023

- Extracted and prepared data from SEER*Stat for analysis, with a focus on early-onset colorectal cancer
- Conducted preliminary statistical calculations, including mean and variance, to understand data distributions
- Developed graphics to detect critical patterns and trends
- Utilized SAS software for statistical analysis, evaluating data using p-values
- Helped identify crucial areas for further research and discussion in thesis development

Regression Model Design for Human Bodyfat Prediction

Madison, WI

Group Project supervised by Prof. Hyunseung Kang

September 2023 – November 2023

- Imported dataset into RStudio and detected outliers using Cook's distance, leverage point, and IQR analysis
- Assessed dataset normality, homoskedasticity, and linearity using qqplot and residual plot
- Explored regression models, including Simple Linear Regression (SLR) and Multiple Linear Regressions (MLRs)
- Conducted literature review to identify and incorporate predictors that balance robust prediction capabilities with simplicity for practical daily use
- Performed F-test to evaluate and compare regression models and select the most effective ones
- Achieved a high-performing final model with an R-square exceeding 0.7 and (RMSE) of 4.08

Algebra/Probability (Directed Reading Program)

Madison, WI

Participant

February 2024 – May 2024

- Explored advanced mathematical concepts under the guidance of a graduate student mentor, focusing on the Free Central Limit Theorem (FCLT) from "Lectures on the Combinatorics of Free Probability"
- Acquired knowledge beyond the standard curriculum, delving into non-commutative algebra and its probability space
- Presented findings on FCLT in the final program presentations

Stars and Planets Data Analyzation

Madison, WI

Group Project

November 2023

- Used Python and Jupyter Notebook to process JSON and CSV data into structured data frames and developed functions to handle missing data
- Created graphs such as scatter plots and pie charts for data visualization and analysis of astronomical data
- Applied astrophysical formulas to identify potential habitable planets and predict star and planet characteristics

Wordle Game

Madison, WI

Individual Project

May 2022

- Utilized Java programming language in IntelliJ to develop a Beginner-level wordle game
- Implemented techniques including ArrayList management, pseudorandom number generation, and robust error-handling mechanisms to guarantee seamless user interaction and error-free gameplay experience

PROFESSIONAL EXPERIENCE

Outlier AI.	Remote
<i>Intern</i>	April 2024-present
<ul style="list-style-type: none">• Analyzed and assessed the accuracy and quality of responses generated by AI models for given mathematical problems• Implemented corrections and enhancements to refine and adjust AI-generated responses• Utilized advanced mathematical knowledge and LaTeX formatting to improve the clarity and correctness of model outputs• Assisted in updating and refining algorithms to better address complex mathematical problems	

China Mobile Sichuan Corp.	Chengdu, China
<i>Marketing Analyst</i>	May 2023 – June 2023
<ul style="list-style-type: none">• Analyzed carrier service marketing data for personal cellular phone plans using advanced Excel techniques• Conducted data analysis to identify market trends, customer preferences, and pricing strategies, optimizing cellular phone plans and maximizing customer satisfaction• Collaborated with cross-functional teams to implement data-driven price adjustments and promotional campaigns	

EXTRACURRICULAR ACTIVITIES

Burkard Lab, UW-Madison Department of Medicine	Madison, WI
<i>Lab Assistant</i>	January 2023 – May 2023
<ul style="list-style-type: none">• Maintained the functioning of Burkard Lab by providing support to lab operations• Gained hands-on experience in various general lab techniques, including autoclaving, restocking materials for breast cancer research, and preparing chemical solutions and buffers	

UnityPoint-Meriter	Madison, WI
<i>Clinical Shadowing Assistant</i>	October 2022 – December 2022
<ul style="list-style-type: none">• Shadowed a UW-Health Professor specializing in colon & rectum surgery• Participated in clinical settings, closely observing and assisting the surgeon during patient consultations, gaining practical communication skills with patients, physicians, and rotating medical students	

McBurney Disability Resource Center, UW-Madison	Madison, WI
<i>Notetaker</i>	June 2022 – July 2022
<ul style="list-style-type: none">• Provided notetaking support for the History 130 course, assisting students with learning disabilities• Utilized advanced techniques within Windows Word to format and enhance notes, adhering to specific guidelines to optimize readability and utility for students with diverse learning needs	

ADDITIONAL INFORMATION

Technical: MATLAB, Python, R/RStudio, SAS, SQL, LaTeX, Microsoft Office, Java, VB/VBScript, HTML
Certificate: Basic Life Support Provider (eCard Code: 235411670163, American Heart Association, Dec 2022-Dec 2024)
Languages: English (Fluent), Chinese (Native), German (Beginner)