

# YIMENG WANG

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## Education

### William & Mary

*Ph.D. student in Computer Science*

**January 2024 - Now**

*Williamsburg, VA*

### University of Notre Dame

*Ph.D. candidate in Statistics*

**September 2021 – December 2023**

*Notre Dame, IN*

- GPA: 3.85/4.0
- Major Courses: Applied Linear Models, Applied Probability, Statistical Methods in Data Mining and Prediction, Statistical Inference, Applied Generalized Linear Models, Stochastic Analysis, Topics in Machine Learning.

### University of Science and Technology Beijing

*B.S. in Information and Computing Science*

**September 2017 – June 2021**

*Beijing, CHINA*

- GPA: 3.72/4.0 (87.9/100) Major GPA: 3.88/4.0 (90.2/100)
- Major Courses: Data Structure, Programming with C#, Machine Learning and Its Application, Information Security and Cryptology, Database and Its Application, Advanced Algebra (I, II), Mathematical Analysis (I, II, III), Discrete Mathematics, Random Process, Numerical Analysis, Statistical Model and Calculation.

### University of Notre Dame

*International Summer Undergraduate Research Experience 2020 Program*

**June 2020 – August 2020**

*Notre Dame, IN*

- Content: classification, cluster, boosting and bagging algorithms, dimension reduction, tSNE, u-map, PCA, MDS and isoMAP, bias, var and trade-off.

## Honors & Awards

<b>The Third Prize in The Fifteenth National College Student Smart Car Competition</b>	<b>2020</b>
<b>Merit Student</b> (awarded for top 5% academic performance in USTB)	<b>2018–2019</b>
<b>People's Third-class Scholarship</b> (awarded for top 5% academic performance in USTB)	<b>2018–2019</b>
<b>Excellent Student Leader</b> (awarded for leadership among students' organization in USTB)	<b>2017–2018</b>
<b>People's Second-class Scholarship</b> (awarded for top 3.5% academic performance in USTB)	<b>2017–2018</b>

## Publication

- Yixuan Zhang, **Yimeng Wang**, Nuchanon Yongsatianchot, Joseph D Gaggiano, Nurul M Suhaimi, Anne Okrah, Jacqueline Griffin, Miso Kim Andrea G Parker. 2024. Profiling the Dynamics of Trust & Distrust in Social Media: A Survey Study. In *CHI'24: CHI Conference on Human Factors in Computing Systems*, May 11-May 16, 2024, Oahu, Hawai'i, USA. ACM, New York, NY, USA.
- **Yimeng Wang**, Francis Geng, Yixuan Zhang. 2024. Ethics of Large Language Models: A Scoping Review. In *CSCW '24: The 27th ACM Conference on Computer-Supported Cooperative Work and Social Computing*, November 9-13, 2024, San José, Costa Rica. ACM, New York, NY, USA. (under review)

## Research Experience

### Profiling the Dynamics of Trust & Distrust in Social Media

**July 2023 – September 2023**

*Advisor: Prof. Yixuan (Janice) Zhang*

*William & Mary*

- \* Conducted a large-scale survey with 1,769 U.S. participants examining trust and distrust in social media.
- \* Led comprehensive analysis on trust and distrust in social media, encompassing descriptive statistics, factor analysis, clustering via Gaussian Mixture Model (GMM), multiple regression for demographic impacts, and group comparison tests.

### Functional ANOVA (FANOVA) Method on Geostatistical Data

**September 2022 - June 2023**

*Advisor: Prof. Stefano Castruccio*

*University of Notre Dame*

- \* Analyzed the effect of landscape evolution on extreme precipitation through physical and chemical assessments.
- \* Utilized the FANOVA model to identify the sensitivity of various factors, including the existence of cities, Weather Research and Forecasting (WRF) resolutions, and other relevant variables.
- \* Employed the Integrated Nested Laplace Approximation (INLA) approach to achieve efficient computational performance by incorporating the SPDE method.

## Deep Learning Methods in Protein Structure Prediction

January 2019 – June 2019

Advisor: Prof. Yan Xu

University of Science and Technology Beijing

- \* Conducted deep learning research in biology with a focus on protein structure prediction.
- \* Proposed a Convolutional Neural Network (CNN) model, DeepUbi, to accurately predict ubiquitination sites.
- \* Evaluated the performance of our algorithm on large databases and employed transfer learning techniques to apply it to extensive datasets.

## Working Experience

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### Dynamic Risk Prediction on a Longitudinal Biomarker | *Python, R* September 2023 – December 2023

- \* Predicted the risk of a future binary outcome based on a repeatedly measured predictor.
- \* Used Convolutional Neural Networks (CNN) and Long Short-Term Memory Networks (LSTM) to extract features and analyze the temporal dependencies in longitudinal blood sequencing data for disease prediction.

### Testing Homogeneity between Sparse Functional Data | *R, Rcpp, C++* June 2023 – August 2023

- \* Developed an R-package that implements the novel methodology proposed in the research paper “Testing Homogeneity: The Trouble with Sparse Functional Data.”
- \* Employed Rcpp, an interface for integrating C++ into R applications, enhancing both the speed and stability of the algorithm.

## Technical Skills

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**Languages:** Python, R, C, C++, C#, SQL, MATLAB, SAS (certificated), Latex

**Technologies/Frameworks:** Linux, GitHub

**Computer skills:** Adobe Photoshop, Tableau

## Teaching Experience

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### Scientific Computing with Python

Fall 2023

FA23-ACMS-20220

- \* Led a weekly 50-minute tutorial, focusing on thought organization rather than direct solutions.
- \* Introduced multiple problem-solving methods to inspire varied approaches.
- \* Had Zoom office hours to better accommodate student schedules and ensure accessibility, with recorded content uploaded for self-study benefits.

### Behaviour Data Science

Fall 2023

FA23-DS-60632

- \* Reviewed and validated all materials for classroom instruction and homework assignments, ensuring accuracy and appropriateness for the course level.
- \* Collaborated with course instructors to ensure a well-structured and pedagogically sound curriculum.
- \* Graded all weekly homework and wrote reports and made recommendations on the efficacy of lessons based on student performance.

### Linear Models

Spring 2022

SP22-DS-64510

- \* Taught 30-minute review classes at the end of professor's sections every Tuesday.
- \* Graded all weekly homework, and provided regular feedback to students during 2 hours of office time per week.
- \* Wrote reports and made recommendations on the efficacy of lessons based on student performance.

## Service & Extra-curricular Experience

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### Team Captain for APP development

July 2020 – December 2020

- Developed an APP tailored to students who prepare for postgraduate admission test.

### Group Leader in Smart Car Competition

September 2020 – November 2020

### Director of Propaganda Department in Student Union

September 2018 – June 2019

- Allocated tasks including material preparation, rehearsal, promotional video making and photography.
- Guided the team in supporting a series of large-scale activities.