Nuo (Kelly) XU

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Education

Rutgers University–New Brunswick New Brunswick, NJ, USA

Bachelor of Art in Computer Science & Mathematics, Double Major (GPA: 3.97/4.0) Sept. 2023 – May 2026

- Honors & Awards: SAS Excellence Award, Alan Marc Schreiber Memorial Scholarship
- Coursework: Real Analysis (Honor), Multivariable Calculus, Differential Equations, Linear Optimization, Machine Learning Principles, Graph Theory, Data Structures, Discrete Structures, Computer Architecture, Design and Analysis of Algorithms, Probability Theory, etc.

Shanghai Jiao Tong University Shanghai, China

Bachelor of Science in Biotechnology, Honor Program (Transferred) Aug. 2021 – June 2023

- Honors & Awards: Excellent Student Scholarship
- Coursework: Calculus I&II, Linear Algebra, Probability and Statistics, University Physics I&II, C++, Analytical Chemistry, Engineering Practice, Eco-Tech Innovation Experiment, etc.

Publication

- Nuo, X., Xiang, Z., Yiwei, X., & Chengyu, Y. *Beauty is in the Eye of the Beholder: Uncovering Aesthetic Bias in Multimodal Perception and Generation.* Submitted to ACL.

Research Experience

Stony Brook University – Research Assistant

'Research on Aesthetic Bias in Multimodal AI Systems' June – Aug. 2025

- **Advisor:** Prof. Chenyu You
- Conducted a comprehensive empirical study to uncover aesthetic biases in state-of-the-art multimodal AI models (e.g., GPT-4o, Gemini, Hunyuan).
- Designed and implemented a systematic benchmark to evaluate both perception bias (how models rank attractiveness in diverse human portraits) and generation bias (stylistic tendencies in model-generated portraits).
- Built a custom portrait dataset spanning various ethnicities and genders; applied model APIs, automated pairwise comparison, and collected AI-generated aesthetic bias ratings, complemented by human evaluations.
- Revealed consistent Western-centric aesthetic preferences in mainstream AI models, highlighting the need for more culturally inclusive model training and evaluation.

Rutgers University–New Brunswick – Research Assistant, STEM Research Program

'Differential Privacy in Applied Social Science Settings' June – Aug. 2024

- **Advisor:** Prof. Ruobin Gong
- Implemented and tested differential privacy synthetic data generators, including DataSynthesizer and PrivBayes, to compare performance in replicating results from the Current Population Survey (CPS).
- Developed a systematic Python program that processes raw data files, replicates results from original studies, and computes confidence intervals, enhancing reproducibility and analysis efficiency.
- Analyzed effects of privacy budget (ϵ) and model parameters on synthetic data quality, including complex queries such as the relationship between e-cigarette use and smoking cessation.
- Authored a research paper detailing methodology and findings; presented results in a poster at the SUPER Research Symposium, highlighting secure data sharing via differential privacy.
- For more details, please see the **GitHub Repository**.

Rutgers University–New Brunswick – Research Assistant

'Continuous Aggregated Accumulation Model of Recognition Judgments' Feb. – May 2024

- **Advisor:** Prof. Arnold Glass
- Explored methodologies for calculating the area under reaction-time curves across numerous images without explicit functional forms, focusing on accuracy and workload efficiency.

- Selected ImageJ over coding after evaluating precision and efficiency requirements; performed threshold adjustment and edge detection for preprocessing.
- Established axis scales, conducted area measurements, analyzed findings, and integrated variables into a database for comparative model evaluation.

Shanghai Jiao Tong University – Research Assistant

'Machine learning-based analysis of single-cell sequencing data in cholangiocarcinoma' Mar. – June 2023

- **Advisor:** Prof. Ting Shi
- Conducted extensive literature reviews on cholangiocarcinoma; extracted and organized key findings from scholarly sources.
- Designed and implemented an unsupervised ML framework using Variational Autoencoder (VAE) to extract latent features from CT images.
- Preprocessed imaging data (resizing, normalization, numeric conversion) and applied Gaussian Mixture Model (GMM) clustering; evaluated with t-SNE visualization.

Shanghai Jiao Tong University – Research Project

'Make the best use of Tea' – Research on pain points in tea production areas July – Sept. 2022

- Collected data via field visits at 11 locations across 8 provinces to study COVID-19 impacts on the tea industry.
- Produced a short promotional video and marketing suggestions to help local farmers boost sales; awarded "Excellent Research Program."

Internship Experience

- **High Ridge Futures USA,** Mclean, VA, USA *Quantitative Trading Intern* June – Aug. 2023
- **Shanghai Linghe Asset Management LLP,** Shanghai, China *Quantitative Research Intern* July – Aug. 2022

Teaching Experience & Leadership

- **Rutgers University–New Brunswick,** New Brunswick, NJ, USA *Math Tutor* Sept. 2024 – Present
- **'ZHIMEI' Rural Education,** Shanghai, China *Math Teacher* Feb. – July 2022
- **Shanghai Jiao Tong University,** Shanghai, China *New Student Leader* Aug. – Nov. 2021

Skills & Interests

- **Certificates:** Python for Everyone Specialization, University of Michigan (May 2022)
- **Technical:** Python, C++, Java, Overleaf, ImageJ, MS Office, SolidWorks, MATLAB, Arduino IDE
- **Languages:** Chinese
- **Other:** Piano level 10; Painting, Chess, Cycling, Tennis, Swimming, Travel