

Xieheng Wang

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Email: wxh19@mails.tsinghua.edu.cn

Phone: (+86) 13905271221

Personal Website: <https://mariana2000.github.io/>

I'm looking for a PhD opportunity starting from fall 2023.

Research interests High dimensional statistics, dimension reduction, spatial statistics, causal inference

Education Tsinghua University Beijing, China

B.Eng. in Measurement, Control Technology and Instruments GPA: 3.72/4.0
Sept. 2019 – Present

Minor in Statistics GPA: 3.89/4.0
Mar. 2021 – Present

Research experience **Relationships and Shared Genetic Influences between T2D Biomarkers and Human Brain Health**

Mentor: Bingxin Zhao (University of Pennsylvania) Apr. 2022 – Present

- Explored the association between Type 2 diabetes and human brain from individual level (polygenic risk score analysis) and summary level (LD Score Regression and Local Analysis of [co]Variant Association).

Pure Noise Enables Privacy-preserving Federated Learning with Non-iid Data

Mentor: Huaiyu Dai (North Carolina State University) July 2022 – Aug. 2022

- Applied OPeN (Oversampling with Pure Noise Image) in the framework of federated learning to enhance performance and privacy.

Feature-based Classification on MQTT Data

Mentor: Jingyi Zhang (Tsinghua University) Oct. 2021 – Present

- Applied POTD (principal optimal transport direction) on MQTT-IoT-IDS2020 dataset to extract features distinguishing different attacks. *One working paper now available in [arxiv](#).*

- Proposed a new ensemble method of classification based on SDR subspace using POTD.

Design and Construction of Vision-based Quadrotor Navigation Control System

Mentor: Kaichun Zhao (Tsinghua University) Sept. 2020 – Dec. 2021

- Applied some visual SLAM methods like SuperPoint on real image data obtained by drone in the environment of smoke.

Teaching experience	Teaching assistant, Department of Military (Tsinghua University)	
		<i>Spring 2022</i>
	<i>The Martial Geomorphology and The Directional Sport (Orienteering)</i>	
	<ul style="list-style-type: none"> • Help place the control points for maps before class and recycle them after class. 	
Honors and scholarships	Sports Excellence Scholarship, Tsinghua University	<i>2022</i>
	Academic Excellence Scholarship, Tsinghua University	<i>2021</i>
	Sports Excellence Scholarship, Tsinghua University	<i>2021</i>
	Academic Excellence Scholarship, Tsinghua University	<i>2020</i>
	Sports Excellence Scholarship, Tsinghua University	<i>2020</i>
Skills	Programming	
	R, Python, PyTorch, MATLAB, C/C++	
	Tools	
	L ^A T _E X, Linux, SPSS, Git, OCAD	
	Languages	
	English (TOEFL:102, CET-6:630), Mandarin (native)	
Standardized Tests	GRE:323 (Verbal:154, Quantitative:169, AW:3.5)	
Leadership&Activities	Vice president of Tsinghua University Student Orienteering Association	
		<i>Sept. 2022 - Present</i>
	Member of Tsinghua Orienteering Team	<i>Oct. 2019 - Present</i>