

HUI(NORBERT) ZHENG

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<https://norbertzheng.github.io>

RESEARCH INTERESTS

- **Machine Learning:** Data Mining; Brain-Computer Interface; Computational Neuroscience

EDUCATION

Peking University, Beijing, China

Sept. 2021 - Jun. 2026 (expected)

Ph.D. in Integrated Life Sciences (physics)

- **Advisor:** Dr. Yunzhe Liu

Wuhan University, Wuhan, China

Sept. 2017 - Jun. 2021

B.E. in Computer Science (with honors)

- **GPA:** 3.84/4.00(92.1/100)
- **Rank:** 2/32(selected from 363 students in School of Computer Science, Wuhan University)
- **Exchange:** Visiting Student at University of California, Berkeley(2019 summer)

PUBLICATIONS

* indicates equal contribution.

- **Hui Zheng**, Haiteng Wang, Yitao Jing, Peiyang Lin, Hanqing Zhao, Penghu Wei, Yongzhi Shan, Guoguang Zhao, Yunzhe Liu, "BrainStratify: Coarse-to-Fine Disentanglement of Intracranial Neural Dynamics," in submission to NeurIPS, 2025.
- Zhongtao Chen*, **Hui Zheng***, Jianyang Zhou*, Lin Zheng*, Peiyang Lin, Haiteng Wang, Raymond Dolan, Tim Behrens and Yunzhe Liu, "Interpreting Sleep Activity Through Neural Contrastive Learning," in submission to Nature Neuroscience, 2025.
- **Hui Zheng***, Haiteng Wang*, Weibang Jiang, Zhongtao Chen, Li He, Peiyang Lin, Penghu Wei, Guoguang Zhao and Yunzhe Liu, "Du-IN: Discrete units-guided mask modeling for decoding speech from Intracranial Neural Signals," in Advances in Neural Information Processing Systems (NeurIPS), 2024.
- Wenquan Xu, Haoyu Song, Linyang Hou, **Hui Zheng**, Xinggong Zhang, Chuwen Zhang, Wei Hu, Yi Wang, Bin Liu, "SODA: Similar 3D Object Detection Accelerator at Network Edge for Autonomous Driving," in IEEE International Conference on Computer Communications (INFOCOM), 2021.
- Yunzhe Li*, **Hui Zheng***, He Zhu*, Haojun Ai and Xiaowei Dong, "Cross-People Mobile-Phone Based Airwriting Character Recognition," in International Conference on Pattern Recognition (ICPR), 2020.

ENGINEER EXPERIENCE

AGIBot, Beijing, China

Nov. 2024 - Jan. 2025

Engineer Intern

Advisor: Dr. Xindong He

- Reproduce Embodied-AI foundation models, such as π_0 , RDT, and LAPA.
- On the AGIBot World dataset, we evaluated the performance differences brought by different model designs and conducted real-machine evaluations.

RESEARCH EXPERIENCE

Peking University, Beijing, China

Jan. 2022 - Dec. 2022

Research Assistant

Advisor: Dr. James Whittington and Dr. Yunzhe Liu

- Research the role of replay for memory consolidation.
- Build a machine replicate the replay observed in both human and rodent.

Peking University, Beijing, China

Mar. 2021 - Aug. 2021

Research Assistant

Advisor: Dr. Si Wu

- Researched the global to local information processing.
- Analyzed the dynamics of the neural network model with gap junction.

Tsinghua University, Beijing, China

May. 2020 - Aug. 2020

Research Assistant

Advisor: Dr. Bin Liu

- Researched the real-time processing of autonomous driving in the Internet of Vehicles.
- Designed efficient algorithms for the novel TCAM-NMC in-network accelerator, which accelerates the MEC-assisted similar 3D object detection for autonomous driving.

Wuhan University, Wuhan, China

Feb. 2020 - Apr. 2020

Research Assistant

Advisor: Dr. Haojun Ai

- Researched transfer learning in Air-Writing.
- Developed a system that could transfer between different people.

AWARDS AND HONORS

Outstanding Graduate (12 out of 127, 10%), Wuhan University	Apr. 2021
National Scholarship, Wuhan University	Oct. 2020
Excellent Student Scholarship (Rank: 1/32), Wuhan University	Oct. 2020
National Second Prize of FPGA Innovation Design Competition, China	Dec. 2019
National Second Prize of Intelligent Robot Fighting Competition, China	Oct. 2019
Excellent Student Scholarship (Rank: 4/32), Wuhan University	Oct. 2019
Excellent Student Scholarship (Rank: 8/32), Wuhan University	Oct. 2018
Freshman Scholarship, Wuhan University	Oct. 2017