Jiajun Zhu

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Education

Zhejiang University *(Expected) Sept. 2020 - Sept. 2024*

B.S. in Mathematics *Rank: 3%*

Research

Digital Signal Processing Group, Georgia Institute of Technology *Nov. 2022 - Oct. 2023*

Research Internship *Advisor: Prof. Pan Li*

- Benchmarked geometric deep learning explanation methods with the purpose of scientific discovery.
- Established four fundamental observations to clarify the usage of explainability techniques.
- Drafted the article as the first author with Nature Machine Intelligence as the intended publication target.

Artificial Intelligence Laboratory, Zhejiang University *Aug. 2022 - Oct. 2022*

Research Internship *Advisor: Prof. Yang Yang*

- Implemented five baseline methods and compared them with our method on different molecular datasets.
- Proposed our method's theoretical background and completed the paper's theoretical analysis.

FlexLink Technology Co., Ltd. Hangzhou, China *Dec. 2021 - Feb. 2022*

Research Assistant *Mentor: Dr. Qian Zheng*

- Drew plots using python for statistics analysis. (Bland-Altman agreement, linear regression, etc.)
- Filed a utility patent application, *A Staging-Algorithm-Based Evaluation Method of EEG Signal Quality*.

Experience

7th Finvolution Data Science Competition *Aug. 2022*

Team Member

- Incorporated the message passing into the feature engineering and ranked 5% finally.
- Tuned hyperparameters with bayesian optimization and improved the model by 1%.

Online Exchange Program of Zhejiang University *May. 2022 - Jun. 2022*

Team Leader

- Conducted literature research for the development of MCMC methods and guided members to complete a literature report.
- Performed several toy experiments to compare the convergence rate and sample efficiency of different algorithms.

Student Research Training Program of Zhejiang University *Jan. 2022 - Jun. 2022*

Team Leader *Advisor: Prof. Renjun Xu*

- Crawled 100k+ data of electronic density and band structure from Materials Project and Crystallography Open Database.
- Reproduced the baseline models: CGCNN (Xie et al., 2018) and MEGNet (Chen et al., 2018).

Miscellaneous

- Programming Skills: Python - Proficient, C++/C - Competent programmer
- Activities: Runner-up of the campus debate competition, *the 8th Shenyuan Cup*
- Scholarships: 2022 Mingyang Scholarship (selected from top 4 math students)