Jiacong Mi

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Work Experience

Shenzhen Institutes of Advanced Technology **2025.11 – present**
Research Assistant *Shenzhen, China*

- Supervisor: Professor Hao Wu
- Explore the intersection of patient data, drug discovery, and bioinformatics to advance data-driven healthcare.

Education

Southeast University **2021.9 – 2024.6**
Master of Artificial Intelligence *Nanjing, China*

- Supervisor: Professor Jieyue He
- Second Class Academic Scholarship for two times
- Thesis: Research and Implementation of Medication Recommendation and Clinical Prediction Based on Electronic Health Records
- Relevant Courses: Pattern Recignition, Database Management Systems, Algorithm Design and Analysis

Monash University **2021.9 – 2024.6**
Master of Information Technology Systems *Suzhou, China*

- Second Class Honours Division A
- Relevant Courses: Machine Learning, Deep Learning, Natural Language Processing

Shandong Normal University **2017.9 – 2021.6**
Bachelor of Computer Science and Technology *Jinan, China*

- Relevant Courses: Computer Network, Computer Composition Principle, Operating System

Skills

- Python, Bash, Git
- Pytorch, PyTorch Geometric, Deep Graph Library, TensorFlow, Scikit-learn, NumPy, Pandas
- Transformer, GNN, CNN, RNN, Attention Mechanisms, Transfer Learning, Graph Embeddings

Publication

- **Mi, J.**, Zu, Y., Wang, Z., & He, J. (2024). ACDNet: Attention-guided Collaborative Decision Network for effective medication recommendation. Journal of Biomedical Informatics, 149, 104570. (CCF-C, SCI-Q2)
- Liu, Y., Zhang, Z., **Mi, J.**, Pan, S., Chen, T., Guo, Y., ... & Bian, J. (2025). GatorCLR: Personalized predictions of patient outcomes on electronic health records using self-supervised contrastive graph representation. Journal of Biomedical Informatics, 104851. (CCF-C, SCI-Q2)
- Li, Z., Zhou, G., Li, H., **Mi, J.**, Shi, J., & Shen, J. (2025). Deep Learning-Driven Protein-Ligand Binding Affinity Prediction: Data, Architecture, Training and Evaluation. IEEE transactions on computational biology and bioinformatics. (CCF-B, SCI-Q1)
- Pu, H., **Mi, J.**, Lu, S., & He, J. (2023). RoKEPG: RoBERTa and Knowledge Enhancement for Prescription Generation of Traditional Chinese Medicine. In 2023 IEEE International Conference on Bioinformatics and Biomedicine (BIBM) (pp. 4615-4622). IEEE. (CCF-B)
- Zu, Y., **Mi, J.**, Song, L., Lu, S., & He, J. (2023). Finformer: A Static-dynamic Spatiotemporal Framework for Stock Trend Prediction. In 2023 IEEE International Conference on Big Data (BigData) (pp. 1460-1469). IEEE. (CCF-C)
- Wang, Z., **Mi, J.**, Lu, S., & He, J. (2023). MultiModal-Learning for Predicting Molecular Properties: A Framework Based on Image and Graph Structures. arXiv preprint arXiv:2311.16666.

Projects

Molecular Generation based on 3D Protein Pockets | *neoX Biotech* May 2023 – August 2023

- Proposed a 3D molecular generation model based on protein pockets
- During the training phase, the pre-trained molecular representation model was incorporated into the molecular generation model to enhance molecular representation
- During the sampling phase, the new molecular encoder was uesed to generate molecules
- Conducted extensive experiments on the Crossdocked dataset, demonstrating that our method surpasses the original approach

TCM Knowledge Graph tool | *Python, Flask, HTML, JavaScript* September 2022 – November 2022

- Developed a Traditional Chinese Medicine knowledge graph tool that can add, delete, modify and query, which is convenient for users to access and maintain the knowledge graph
- This tool used Neo4j to store Chinese medicine knowledge Graph information, used the Flask framework for front-end and back-end interaction, and used HTML and JavaScript for front-end display

Intern Experience

neoX Biotech | *www.neoxbio.com* | *AI Drug Discovery Algorithm Intern* May 2023 – August 2023

- Investigated and tested various protein pocket-based molecular sampling methods
- Investigated and tested various methods based on molecular representation learning
- Attempted to enhance various molecular sampling methods across many datasets to achieve improved performance

Insilico Medicine | *www.insilico.com* | *Bioinformatics Intern* December 2022 – January 2023

- Investigated and tested on hERG ion channel prediction models
- Investigated and tested various methods of molecular fingerprints and graph neural networks to represent molecules