HANSHENG XUE

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The National University of Singapore, COM2-04-04, 13 Computing Drive, Singapore 117417

EDUCATION

The Australian National University   Canberra, Australia
Ph.D. in Computer Science   Sep. 2019 - Jul. 2024
Supervisor: Yu Lin, Vaibhav Rajan (NUS), and Lexing Xie.
Thesis: Graph Representation Learning for Structured Data and Genomic Analysis.

Harbin Institute of Technology   Shenzhen, China
M.Eng. in Computer Technology   Sep. 2015 - Jan. 2018

Nanjing Tech University   Nanjing, China
B.M. in E-Commerce   Sep. 2011 - Jun. 2015

RESEARCH AND INDUSTRY EXPERIENCE

Research Assistant, School of Computing, National University of Singapore, Singapore.   Nov. 2023 - Jul. 2024
Research Intern, Alibaba Group, Hangzhou, China.   May 2020 - Feb. 2021

PUBLICATIONS

(†: Co-first author, ⋆: Corresponding author.) [Google Scholar, DBLP]

[1] Hansheng Xue, Vijini Mallawaarachchi, Lexing Xie, and Vaibhav Rajan, "Encoding Unitig-level Assembly Graphs with Heterophilous Constraints for Metagenomic Contigs Binning", *ICLR'24*.

[2] Aishwarya Jayagopal, Hansheng Xue, Ziyang He, Robert John Walsh, Krishna Kumar Hariprasannan, David Shao Peng Tan, Tuan Zea Tan, Jason J. Pitt, Anand D Jeyasekharan, and Vaibhav Rajan, "Personalised Drug Identifier for Cancer Treatment with Transformers using Auxiliary Information", *KDD'24*.

[3] Hansheng Xue, Vaibhav Rajan, and Yu Lin, "Graph Coloring via Neural Networks for Haplotype Assembly and Viral Quasispecies Reconstruction", *NeurIPS'22*.

[4] Hansheng Xue, Vijini Mallawaarachchi, Yujia Zhang, Vaibhav Rajan, and Yu Lin, "RepBin: Constraint-Based Graph Representation Learning for Metagenomic Binning", *AAAI'22*.

[5] Hansheng Xue, Luwei Yang, Vaibhav Rajan, Wen Jiang, Yi Wei, and Yu Lin, "Multiplex Bipartite Network Embedding using Dual Hypergraph Convolutional Networks", *WWW'21*.

[6] Hansheng Xue†, Luwei Yang†, Wen Jiang, Yi Wei, Yi Hu, and Yu Lin, "Modeling Dynamic Heterogeneous Network for Link Prediction using Hierarchical Attention with Temporal RNN", *ECML-PKDD'20*.

PROFESSIONAL SERVICE

Organizing Committee: ANU Workshop on Computational Genomics, Canberra, Aug. 2023.

Journal Reviewer: Briefings in Bioinformatics(x4), BMC Genomics(x2), BMC Bioinformatics(x2), Artificial Intelligence Review(x1), IEEE/ACM TCBB(x1), BioData Mining(x1), PLOS ONE(x1), Frontiers in Neuroscience(x1).

Program Committee/Reviewer: AAAI'25/24/23, IJCAI'24/23, AISTATS'24, NeurIPS-TGL'23, ECML-PKDD'20.

TEACHING EXPERIENCE

Guest Lecturer for Database Systems, Shandong University (ANU/SDUW Joint Program), China.   Autumn 2023
Tutor for Statistics Machine Learning, Australian National University, Canberra, Australia.   Feb. 2023 - Jun. 2023

SELECTED HONORS AND AWARDS

AAAI Student Scholarship   2022
ANU PhD Scholarship (International)   2019
First Prize Award, Bachelor's Degree Thesis Competition of Jiangsu Province, China (Top 1%)   2015

INVITED TALKS AND POSTER PRESENTATIONS

1. "Encoding Unitig-level Assembly Graphs with Heterophilous Constraints for Metagenomic Contigs Binning", ICLR'24, Vienna Austria, May 2024.
2. "Metagenomic Binning using Graph Neural Networks", ISMB/ECCB'23 Microbiome, Lyon, France, Jul. 2023.
3. "Graph Coloring via Neural Networks for Haplotype Assembly and Viral Quasispecies Reconstruction", NeurIPS'22, Virtual, Dec. 2022.
4. "RepBin: Constraint-Based Graph Representation Learning for Metagenomic Binning", AAAI'22, Virtual, Feb. 2022.
5. "Multiplex Bipartite Network Embedding using Dual Hypergraph Convolutional Networks", WWW'21,Virtual, Apr. 2021.