Yongkang Li

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Website: socralee.github.io

Education

University of Washington, Seattle, PhD in Computer Science and Engineering — Sept. 2024 – Now

- Research Area: Foundation model in biomedicine.

University of California, Berkeley, MEng in Operation Research — Sept. 2023 – May. 2024

- Core GPA 4.0/4.0
- Core Courses: Probability Theory (A+), Financial Engineering (A+), Optimization Analysis (100)

Peking University, BS in Data Science — Sept. 2018 – Jun. 2022

Experience

GE HealthCare — Seattle, WA
Research Scientist Intern — May 2024 – Aug 2024

- Developed a multi-agent system for single cell analysis, enabling low-code solutions in the field.
- Collaborated effectively with team members, ensuring constructive project outcomes.

Publications

Deep Graph Mutual Learning for Cross-domain Recommendation — 2022

Yifan Wang, **Yongkang Li**, Shuai Li, Weiping Song, Jiangke Fan, Shan Gao, Ling Ma, Bing Cheng, Xunliang Cai, Sheng Wang, Ming Zhang

Proceeding of the 27th International Conference on Database Systems for Advanced Applications (DASFAA)

Research Project

ChemDiffuse: 3D Super-resolution chemical imaging via Diffusion-based Generative Model — Oct 2024 – Now

- Developed ChemDiffuse for 3D super-resolution chemical imaging, targeting 40x resolution enhancement (4x in x-y plane, 10x in z-axis) and 160x lab sampling speed.
- Currently refining 3D diffusion implementation with promising initial results.

Multi-agent System for Single Cell Analysis — May 2024 – Aug 2024

- Streamlined programming into three steps: requirement parsing, API assignment, and parameter selection/programming, each handled by an LLM group.
- Evaluated the performance of multi-agent systems compared to single language models, demonstrating significant improvements.
- Halted development after identifying a recent published system with broader library coverage and versatility.

GNN-based Cross-domain Recommender System — Feb 2021 - Aug 2021

- Developed cross-domain recommender system to address cold start issues.
- Utilized attention-based graph neural networks, achieved significant improvement and published a paper.

Selected Awards and Honors

Second Place in Henan College Entrance Exam (out of 983,000 students) — Jun. 2018
First Prize of Freshmen Scholarship — Dec. 2018
Merit Undergraduate Research — Mar. 2022
Yuanpei College Academic Star and Outstanding Graduate — Jun. 2022