

Yiyang Bian

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Education

- 2024 – Present **Ph.D. Computer Science, University of California, Riverside**
- 2021 – 2024 **M.S. Computer Science, Case Western Reserve University.**
Thesis title: *Extending Collaborative Filtering For ML Model Recommendation.*
- 2017 – 2021 **B.S. Computer Science, Central China Normal University.**

Employment History

- 2022.3 – 2024.8 **Software Engineer Intern, BioInVision Inc.** Cleveland, OH, USA
 - Developed a web based 2D,3D biomedical image browsing system based on Python Flask, JavaScript, HTML.
 - Utilized WebGL to implement 3D image rotation, scaling, translation, and rendering, enhancing user interaction and visual experience.
 - Deployed the project on Azure Virtual Machine and stored data in Azure MongoDB, ensuring scalability and reliability.
- Graduate Research Assistant, Case Western Reserve University.** Cleveland, OH, USA
 - Design and implement Pegasus workflow management scripts for scientific workflow of material analysis. (Paper I)
 - Design datasets crawling and preprocessing Python scripts to extract image classification datasets features from Kaggle and HuggingFace platform, and utilized Keras pre-trained machine learning models to train get model performance and environmental settings. (Paper II)
 - Implemented the comparison between the experimental part baselines and applied to the new test dataset, compared with our new graph-based data discovery algorithm and completed the report of the experimental learning part. (Paper II)
- 2021.1 – 2021.7 **Software Engineer Intern, Kingsoft Cloud.** Beijing, China
 - Developed Java application interface for big-data analyses from Excel and Word documents and storing the meta-data into Kingsoft Cloud MySQL, SQL Sever databases.
 - Optimized the Java framework using Spring Boot to enhance development efficiency, integrated MyBatis Plus for database operations, and managed dependencies with Maven.

Teaching History

2022.3 – 2024.8

📖 **HPC Teaching Assitant**, Case Western Reserve University. Cleveland, OH, USA

- Led HPC instruction covering MPI, OpenMP, GPU programming with CUDA/OpenCL.
- Utilized diagnostic tools for performance tuning, managed HPC resources using Slurm/Torque, introduced parallel file systems and cloud computing techniques, and collaborated on course improvements based on feedback.

Research Publications

Conference Proceedings

- 1 M. Wang, S. Guan, H. Ma, *et al.*, “Selecting top-k data science models by example dataset,” in *Proceedings of the 32nd ACM International Conference on Information and Knowledge Management*, ser. CIKM '23, Birmingham, United Kingdom: Association for Computing Machinery, 2023, pp. 2686–2695, ISBN: 9798400701245. 📄 DOI: 10.1145/3583780.3615051.
- 2 M. Wang, H. Ma, A. Daundkar, *et al.*, “CruX: Crowdsourced materials science resource and workflow exploration,” in *Proceedings of the 31st ACM International Conference on Information & Knowledge Management*, ser. CIKM '22, Atlanta, GA, USA: Association for Computing Machinery, 2022, pp. 5014–5018, ISBN: 9781450392365. 📄 DOI: 10.1145/3511808.3557194.

Skills

Languages	📖 Strong reading, writing and speaking competencies for English, Mandarin Chinese.
Coding	📖 Java, Python, SQL, C, MATLAB
Databases	📖 MySQL, PostgreSQL, HSQL, SQLite, LotusNotes.
Web Dev	📖 HTML, CSS, JavaScript, Apache Web Server, Tomcat Web Server.
Misc.	📖 Academic research, teaching, training, consultation, L ^A T _E X typesetting and publishing.