

Yining Hou

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Blog: <https://eitd.github.io/> · Github: <https://github.com/EITD>

Education

East China Normal University, Bachelor 2019.9 –2023.6

- **Major:** Software Engineering
- **Courses:** Digital Logic (Theory and Practice 4.0/A), Principles of Programming (4.0/A), Data Structures and Algorithms (4.0/A), Object-Oriented Programming (Java 4.0/A), Functional Programming (4.0/A)

KTH Royal Institute of Technology, Master 2023.9 –present

- **Major:** Software Engineering of Distributed Systems
- **Courses:** Modern Methods in Software Engineering (A), Data Intensive Computing(A), High Performance Computing (A), Programming of Interactive Systems (A), Data Mining(IP), Scalable Maching Learning(IP)

Experience

KTH Data Systems Lab, Research Engineer 2024.6 –present

- **Machine Learning Model:** Enhanced a link prediction model using Python and PyTorch, incorporating MLflow for model tracking and deployment.
- **Backend Development:** Developed middleware for a hybrid neural graph database system(Orb) in C++, ensuring interaction between components like machine learning engine and vector database.
- **Database Infrastructure:** Worked with graph databases, including Neo4j, to optimize hybrid queries.
- **DevOps:** Maintained CI/CD pipelines for testing and deployment, with version control using Git.

SAP, Software Developer Intern 2022.1 –2022.11

- **Android Development:** Contributed to the development of the “SAP for Me” application by implementing features with Kotlin, integrating RESTful APIs, and maintaining documentations for research.
- **Testing & Quality Assurance:** Ensured application reliability through rigorous unit and api testing.
- **Agile Collaboration:** Collaborated with cross-functional teams, leveraging agile methodologies, pair programming and code reviews to enhance code quality.

Projects

Distributed Graph Neural Networks Training 2024

- Implemented k-hop neighborhood queries and message-passing-based neighborhood aggregation for GNN training, utilizing RPC and Socket protocols.
- Innovated with marker-based asynchronous training by epoch snapshotting via TCP FIFO channel for causality.

Finite Difference Wave Equation Simulation 2024

- Set up a double-slit experiment in C and optimized execution using HPC techniques: OpenMP for the shared-memory version and MPI for the distributed version.
- Analyzed performance with different threads and processes and developed a performance model.

Scalable Gesture Recognition Using HDFS and Spark 2024

- Developed a scalable system for gesture recognition using deep learning techniques, focused on efficient data storage and processing.
- Stored large data in HDFS and utilized Spark to read and preprocess the dataset in a parallel way.

Skills

- **Technical Skills:** C/C++, Python, Java, Kotlin, JavaScript, Erlang, NoSQL, SQL, Android, Pytorch, MLFlow, Docker, Spark, Git, Agile, Scrum
- **Soft Skills:** Problem solving, Critical thinking, Adaptability, Teamwork, Leadership, Time management
- **Communication:** English(IELTS - 7 .5), Chinese(Mother Tongue), Japanese(N3), Swedish(A2)