Jun Zhang

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Place of residence: Iowa City, USA 52245

Education

2021/01 - 2024/05	**University of Iowa**	**BA in Computer Science**
2021/05 - 2024/01	**Kirkwood Community College**	**Guest student**
2017/09 - 2020/06	**Muping No.1 High School**	**High School**
2013/09 - 2017/06	**Ninghai Middle School**	**Middle School**
2008/09 - 2013/06	**Ninghai zhongxin Elementary School**	**Primary School**

Projects

2023/11 - 2023/12 **WARP Sensor Network Refactoring and Analysis** **Project member**

- Collaborated within a team to refactor the Swift codebase into Java, prioritizing modularity and maintainability to streamline the development process.
- Applied object-oriented design patterns to the Java rewrite, enhancing code readability and efficiency, and contributing to a more scalable and adaptable system.
- Developed and integrated a latency evaluation module within the WARP system to measure the end-to-end latency of network flows, emphasizing precision and performance evaluation. Methods are implemented corresponding to interfaces by a planned sequence diagram.
- Designed and implemented a GUI table in Eclipse configuration along with a UML diagram (by yatta.de) for real-time visualization of latency metrics, providing a user-friendly interface for monitoring system performance.
- Conducted thorough testing and debugging procedures to ensure the reliability and accuracy of the latency evaluation feature, demonstrating a commitment to delivering a robust and error-free system.

2023/08 - 2023/12 **Network Intelligence Suite and Research Methodology Implementation** **Project Group Leader**

- Developed Python scripts to emulate key features of ping and traceroute utilities, employing raw sockets and ICMP for echo requests and replies. Implemented traceroute functionality by manipulating Time-To-Live (TTL) values to interpret ICMP timeout responses.
- Designed and deployed a robust multi-threaded TCP server in Python, accommodating concurrent client requests. Integrated real-time network status, bandwidth analysis, and latency measurements based on client demands. Ensured stable server operation through comprehensive error handling and communication protocols.
- Created a methodology for class research using Selenium WebDriver for automated web crawling

and data collection. Developed scripts to navigate, extract, and process data from web pages, showcasing proficiency in web automation and data handling. Analyzed and interpreted collected data to provide effective insights in response to the research question.

2023/012 **Cross- market recommendation by meta- learning and graph representation learning** **Project member**

• Employed meta-learning and graph representation techniques to design a two-sided structure, enhancing the effectiveness of collaborative filtering for the CMR (Collaborative Multimodal Recommendation) task. Developed a novel framework to address challenges in recommendation systems, leveraging advanced methodologies for improved performance.

• Authored a simplified version of the research accepted by GML4Rec, a workshop in ICDM' 23, and currently under review for PAKDD' 24, serving as the first author in both instances. Demonstrates a significant contribution to the field of recommendation systems and meta-learning.

2023/04 - 2023/05 **Data Structure Utilization for Query Optimization** **Solo member**

• Leveraged Sets and Maps data structures to enhance query performance on a U.S. Department of Transportation dataset. Developed efficient Java algorithms for tasks such as identifying distinct destinations, calculating flight frequencies, and analyzing intra-state flight percentages.

• Demonstrated proficiency in advanced Java collections, algorithmic thinking, and JUnit for debugging. Successfully manipulated large datasets, optimized query performance using appropriate data structures, and ensured accuracy through comprehensive testing, showcasing a strong combination of technical skills in data manipulation and algorithm design.

2021/12 **Geo-Twitter Search Application** **Solo Developer**

• Developed a Python-based application integrating Google Maps API and Twitter API for a unique geo-social media experience. Utilized Tkinter module for the graphical user interface, enabling users to input search keywords. Implemented advanced API integration, fetching and displaying relevant tweets with user information through the Twitter API, while simultaneously using the Google Maps API to pinpoint and visualize tweet locations on a map.

• Showcased strong skills in API integration, GUI development using Tkinter, and an innovative approach to merging social media and geographic data. The application enhances user experience by providing a comprehensive view of tweet context and origins, offering valuable insights into the geographic distribution of social media trends.

Skills # Languages

Programming Language: HTML, CSS, JavaScript, JSON, SQL, MySQL, Python, C, C#, Java, Spring, Servlet, Maven, Mybatis, Haskell, Assembly language.

Languages: English (fluent), Chinese (native).