James Koh

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Education

Bachelor of Science, Computer Science and Software Engineering (Double Major) Rose-Hulman Institute of Technology, Terre Haute, IN

May 2024 3.74/4.0 GPA

Skills

Languages: Java, JavaScript, Python, SQL, CSS, HTML, Typescript, C#, C++, C

Libraries/Frameworks: ReactJS, LangChain, ASP.NET, Ruby on Rails, Bootstrap, Redis, Firebase Tools: Git, Docker, Node.js, MongoDB, Neo4j, CouchDB, PostgreSQL, FastAPI, RabbitMQ

Experience Rose-Hulman Institute of Technology – Post Bac Researcher – Indiana

July – Present

- Developed a video pipeline to analyze verbal and non-verbal features while using regression models to predict authenticity scores
- Conducted comprehensive literature reviews to ensure thorough understanding and contextual relevance when editing materials

Drophouse Gen AI – Software Engineer – Illinois

Oct - Dec 2024

- Designed and implemented a guest login system using cookies to manage user access
- Identified and resolved critical software issues that improved system performance and reliability by 30%

Rose-Hulman Ventures – Software Engineer Intern – Indiana

May – Aug 2023

- Developed features for financing web application used by counties across Indiana
- Implemented components in React and Typescript to enhance application functionality by 20%
- Handled server-side operations with SQL Server database in C#
- Piloted database schema design for new employee hire system

Republic Polytechnic – Software Engineer Intern – Singapore

May - Aug 2022

- Developed a REST API using Jakarta EE and OneMap API for last-mile delivery planning
- Implemented security verification of API with JWT
- Optimized work pipelines through supporting company training in the development of automated web tasks by 20%

Projects

Capstone: Gwen's Cookbook

Aug 2023 - May 2024

- Gathered feature requirements and feedback from interactions with client
- Developed full-stack recipe application from scratch using React and Ruby on Rails
- Performed UI and backend testing to reduce bugs by 30%
- Led client relations and organization of feature documentation

Personal Conversation Chatbot

Nov 2023 - Feb 2024

- Implemented a LLM chatbot that adopts colloquial language to converse in Singlish
- Utilized chaining, memory and document retrieval for dynamic interactions
- Achieved linguistic accuracy of ~80% on a qualitative scale
- Spearheaded use of LangChain and delegation of research efforts on LLM models

Activities

Society of Asian Scientists & Engineers (SASE)

Secretary, Social & Cultural Chair

Aug 2021 – May 2024

- Managed database of 130 members and prepared club administrative items for weekly meetings
- Supervised 4 major cultural and diversity events and promoted social media platforms