

Joshua J. Kong

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EDUCATION

The Ohio State University, Columbus, OH

B.S., Computer Science and Engineering, Received August 2020 - May 2023, Magna Cum Laude

M.S., Computer Science and Engineering, Expected June 2024

Dean's List (>3.5 GPA), 6/6 semesters Overall GPA (4.00 scale): 3.79

PROJECTS

Language Interface Factory and Utilization

- Collaborated with seasoned engineering professionals during the Nationwide Enterprise Hackathon to create a full stack application for users to build and use Generative AI chatbots without any coding or engineering expertise.
- Tech Stack: TypeScript, Angular, Tailwind CSS, Python, Flask, AWS, OpenAI, LangChain, Qdrant.
- Helped add ability to create dynamic tools and data sources for each chatbot with LangChain OpenAI embedding.
- Implemented Flask REST API backend using blueprints, flask-restful, and flask-dynamo.
- Achieved Partner-Love Award Final 8, Innovation Award Final 12, Digital Workplace Experience Award Final 13.

Room Matrix

- Developed a web app to help students find open rooms at specific times and buildings to study on OSU campus.
- Made in Python, with Flask and CSS for application front-end, used Selenium WebDriver to scrape information.
- Created in 15 hours as a part of Hack OH/IO hackathon.
- <https://github.com/kavlekar101/2022-Hack-Project-Actual>

Core Language Interpreter

- Built a scanner, parser, and interpreter for a simple custom language (Core) in Java.
- Mastered syntax-directed parsing, printing, execution, and compilation for implementing imperative languages.
- Utilized memory management techniques for imperative languages.
- <https://github.com/JJKong20/Core-Interpreter>

PROFESSIONAL EXPERIENCE

Software Engineer Intern, Nationwide - Columbus, OH (May 2023 – August 2023)

- Worked in several Agile Software Development teams using Java, Python, Typescript, Angular, and AWS.
- Developed maintainable, scalable, industry quality code by learning and utilizing best software practices across the entire Software Development Life Cycle.
- Contributed to a new product to help customers protect their homes and belongings utilizing computer vision with AWS Rekognition and external partner data.
- Created API endpoints to retrieve and cache external data in DynamoDB, made UI changes for adding/displaying customer and cached data.
- Helped develop a Generative AI solution using LangChain OpenAI embedding that could reduce consumer call times and holds by up to 70%.
- Refactored embedding, tool creation, and Qdrant vector store logic; created a class for abstraction of LangChain conversational agent creation, tool creation, and document embedding, increased method reusability by 90%.

Mobile App Developer, Cherish Eyesight and Vision – Columbus, OH (January 2023 – May 2023)

- Developed a mobile application for displaying and quizzing over educational videos using React Native.
- Engineered a REST API with AWS Lambda, DynamoDB, and API Gateway.
- Planned and held meetings with sponsors to define customer use cases and expectations.

Software Engineer Intern, Bellwood Labs – Atlanta, GA (May 2022 – August 2022)

- Developed the frontend of a website for a national law firm using PHP, WordPress, JavaScript, HTML, and CSS.
- Worked closely with clients and senior engineers to create appealing visuals and features.
- Site trafficked over 35,000 views over desktop and mobile in the past month (June 2023).

QUALIFICATIONS

- Skilled in Java, JavaScript, TypeScript, Angular, AWS Cloud Computing, React, Python, Web/Mobile, Ruby on Rails, HTML, CSS, SQL, PHP, WordPress, Version Control Systems, Linux/Unix, Ubuntu, Docker.
- Relevant Coursework: Data Structures and Algorithms, Database Systems, Artificial Intelligence, Machine Learning, Mobile App Development, Web App Development, Computer Networking, Software Development and Design, Programming Principles, Capstone Design: Web Applications.