Jehyeok Yeon

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Education

University of Illinois Urbana-Champaign   August 2022 – December 2025

Bachelor of Sciences in Computer Science + Linguistics. GPA 3.9.

- Relevant Coursework: Data Structures, Algorithms, Database Systems, Cloud Computing Application, Computer Systems, Programming Languages and Compilers
- President, Codable Student Organization: Led a team of over 40 students to organize coding workshops and events along with running semester-long projects, fostering student engagement across different skill levels.

Relevant Experience

Hanwha Life Insurance   June 2024 – August 2024

AI Data Scientist

- Developed a full-stack chatbot application specializing in insurance domain using ElasticSearch, Langchain, LlamaIndex, and Streamlit, implementing a hybrid retriever that improved standard models by 427%.
- Optimized query performance and accuracy by implementing advanced RAG strategies including reranking, query defragmentation, and Hypothetical Document Embeddings (HyDE).

ATLAS   May 2023 – August 2024

Machine Learning Intern

- Developed predictive machine learning models using PyTorch and scikit-learn, achieving 82% accuracy in trend analysis of Chicago weather sensor data, enabling more precise urban climate monitoring.
- Processed over 100,000 rows of Canadian agriculture data to analyze temporal conditions' impact on wheat yield, contributing to improved crop management strategies.

Projects

Workout Planner Application   August 2024 – Current

- Developed a full-stack workout planning application using React, Node.js, and MySQL, deployed on Google Cloud Platform with RESTful APIs for efficient data communication.
- Implemented comprehensive CRUD operations for workout routines, exercises, diets, and user profiles, ensuring seamless data management and real-time synchronization.

ClassTranscribe   August 2024 – Current

- Engineered React components and C# .NET Core backend services to enhance accessibility for visually impaired students.
- Implemented full-stack solutions to transform lecture videos into accessible, picture book-style content, enhancing user experience for visually impaired students.

ESL Learning Hub Web App   May 2023 – August 2024

- Designed and implemented a Flask-based web application with responsive frontend using HTML5, CSS3, and JavaScript to enhance ESL students' reading comprehension and grammar proficiency.
- Integrated advanced NLP methods and LLM pipeline to generate personalized, contextually relevant quizzes and exercises, catering to various ESL proficiency levels.

Note Generation Chrome Extension   August 2023 – December 2023

- Developed a Chrome extension utilizing Flask backend and JavaScript frontend, integrating the open-source LLM Mixtral and OpenAI's wav2vec 2.0 speech-to-text model
- Achieved 85% accuracy in automated note generation from YouTube videos and audio files, enhancing user productivity by over 10 hours per week.

Technical Skills

- Languages: Python, JavaScript, C++, SQL, HTML, CSS, C#
- Frameworks and Tools: React, Flask, Django, LangChain, PyTorch, TensorFlow, OpenCV, Streamlit, MySQL, ElasticSearch, Google Cloud Platform, Docker, Git, RESTful APIs, Full-stack Development