

Youngwoo Kim

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EDUCATION

University of Wisconsin-Madison

Bachelor of Science in Computer Science, Data Science

Madison, WI

Graduation Date: May 2024

WORK EXPERIENCE

Samsung Electronics

Software Engineer

Hwaseong, Gyeonggi-do

Jun 2023 - Aug 2023

- Architected a dynamic web application for a Service Manager UI, reducing process time by 20% and streamlining product engineering with advanced configuration techniques and user-centric design principles
- Developed the client section of the Service Manager using React, Node.js, and JavaScript, enhancing system functionality and user interaction, which led to a 17% increase in client performance metrics
- Integrated client and server communications via RestAPI for the Service Manager, enabling robust command execution and improving operational efficiency by 28%
- Leveraged agile methodologies to lead cross-functional teams in developing a scalable software solution, cutting development time by 33% and enhancing team productivity

PROJECT EXPERIENCE

Real-Time News Collection and Analysis Platform

Software Engineer

Daejeon, South Korea

Mar 2025 - May 2025

- Built a full data pipeline that collects over 10,000 news articles daily via RSS feeds, streams them into Apache Kafka, and processes them with Apache Flink to extract top-5 keywords and 1536-dimensional embeddings per article
- Stored processed data in PostgreSQL, Elasticsearch, and HDFS, enabling <100ms search latency for recent articles and batch processing of 1M+ articles for weekly trend analysis
- Integrated LangChain with Exaone LLM to build a RAG-based chatbot capable of answering semantic queries with >85% relevance accuracy, leveraging vector similarity search over PGVector-enhanced PostgreSQL
- Designed and deployed a web dashboard using Django REST Framework and Vue.js, supporting JWT-based user authentication, personalized article recommendations, and visual analytics with real-time updates

Mhia AI

Machine Learning Engineer

Madison, WI

Jan 2024 - Sep 2024

- Re-architected the system for real-time video data processing, resulting in a 20% reduction in processing time and a 15% improvement in model perception accuracy
- Developed and implemented a perception model using Computer Vision and LSTM to interpret continuous gestures from a real-time camera stream, achieving 93% accuracy in translating sign language to audio
- Enhanced model robustness and generalization performance by 23% by systematically experimenting with diverse model architectures and data augmentation techniques using TensorFlow

Quokka

Founding Software Engineer

Madison, WI

Jan 2024 - Sep 2024

- Implemented and automated CI/CD pipelines, reducing manual testing time by 40% and production bugs by 80% through automated build, test, and deployment workflows, significantly enhancing productivity, code quality, and system stability
- Configured and optimized our cloud infrastructure to support the development environment, leading to a 33% improvement in application performance and a 60% reduction in system downtime through strategic resource management and scaling techniques
- Enhanced security and scalability of the project by containerizing the server and implementing API key management, resulting in improved overall system performance

LEADERSHIP EXPERIENCE

Korean Undergraduate Computer Science Union

Vice President, Subteam Leader

Madison, WI

Sep 2022 - May 2024

- Directed a team of data scientists and engineers to develop a cutting-edge computer vision project for a sign language voice translator using LSTM, resulting in an accuracy rate of 93%
- Organized and facilitated weekly meetings with the group of 50+ individuals to foster collaboration, resulting in a 40% increase in project completion rates

SKILLS

Skills: AWS, GCP, Java, JavaScript, Python, C/C++, React, Node.js, gRPC, Docker, Spark, Kafka, Flink, HDFS, Airflow, MLflow, PostgreSQL, Cassandra, Distributed Systems, Operating Systems, Agile, PyTorch, Tensorflow, Machine Learning, Deep Learning, Computer Vision

Certification: AWS Certified Cloud Practitioner