

Joseph Jimin Kim

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Education

University of Pennsylvania, GSE Philadelphia, PA Accelerated Masters in Learning Sciences & Technologies	August 2026 – May 2028
Haverford College Haverford, PA Bachelors in Computer Science Honors and Awards: John P. Chesick Scholar; The Thomas Wistar, Sr. 1898 Memorial Scholar	August 2021 – May 2027 GPA: 4.0

Projects

- Teaching(AI)** | *Python, Typescript, fastAPI, Next.js, PostgreSQL, Cloudflare R2*
- An educational RAG application with document-based conversations, summarization, and AI-generated exams
 - Designed a scalable RAG pipeline with asynchronous ingestion and parent-child chunking
 - Implemented efficient retrieval with HNSW-based index and response with citations
- Language Learning Buddy** | *Python, Typescript, React, Next.js, GraphQL, MongoDB*
- A language learning platform with conversation, speech practice and personalized AI support
 - Fine-tuned open-source models on 6,000+ synthetic conversations using LoRA adapters for 3 languages
 - Optimized LLM deployment with quantization and deployed real time chat through GraphQL subscription
- Bible Verse Explorer** | *Python, Javascript, Flask, PostgreSQL, Three.js*
- An interactive 3D web application to explore the semantic relationships between bible verses

Work Experience

- Information Security Specialist** Oct. 2024 – July 2026
Intelligence Information Systems Management Group, Republic of Korea Air Force
- Monitored external and internal network activity in the headquarters of Korean Air Force
 - Provided timely solutions to security breaches and system vulnerabilities
 - Developed automated tools for routine checks for firewall and antivirus software, reducing manual workload
- Research Intern** Mar. 2024 – Sept. 2024
AIEd Lab, Yonsei University
- Led the development of an AI program to improve student attention for recorded lectures using openCV library
 - Ran experiments to explore scaffolding approaches to visual-auditory substitution learning
- Teaching Assistant & Lab Monitor** Aug. 2022 – Jan. 2024
CS Department, Haverford College & Bryn Mawr College
- Helped instruct Introduction to CS and Discrete Mathematics, holding weekly office hours and grading homework
 - Resolved technological difficulties and assisted in debugging Python and Java code for 40+ students
- Undergraduate Researcher** May 2023 – Nov. 2023
Summer Science Research, Bryn Mawr College
- Conducted research on the impact of various deadline policies in college level CS courses
 - Reviewed relevant literature, designed survey, and analyzed data from 50+ participants
 - First author of a peer-reviewed paper presented at the 2024 ACM SIGCSE Technical Symposium
- NLP Research Assistant** Jan. 2023 – Aug. 2023
Grissom Lab, Haverford College
- Collected and cleaned Korean-English corpus of more than 1M+ lines for NLP research
 - Implemented pipelines to train Transformer-based MT models using Sockeye framework
 - Evaluated the accuracy of various models and generated plots to represent key findings