

JONGWOOK (ERIC) LEE

(201) 320-5766 | eljw25@gmail.com | linkedin.com/in/jwericlee | github.com/eljw25 | jwericlee.com

EDUCATION

University of Maryland, College Park

Expected Graduation: May 2027

Bachelor of Science in Computer Science, Minor in General Business

GPA: 3.52/4.00

Relevant Coursework: Algorithms, Advanced Data Structures, Computer Systems, Artificial Intelligence, Database Design, Web Application Development, Computer & Network Security, Mobile Systems Development

Awards & Honors: Joint Service Achievement Medal (U.S. Department of Defense), 4x Dean's List

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, Java, C, Kotlin, HTML/CSS

Frameworks: Node.js, React, FastAPI, Express.js, Socket.io

Databases: PostgreSQL/pgvector, MongoDB

Cloud & Tools: AWS (Lambda, API Gateway, EC2, S3, IAM), Git

Certification: AWS Certified Cloud Practitioner, AWS Solutions Architect - Associate (In progress)

EXPERIENCE

Viva Republica (Toss)

Seoul, South Korea

Software Engineer Intern

May 2026 – August 2026

- Built hybrid keyword and semantic search in Node.js across **12,000+ IT support cases** for a Retrieval-Augmented Generation (RAG) Slack assistant used by **3,500+ employees**.
- Migrated the PostgreSQL pgvector index from IVFFlat to HNSW while maintaining **95%+ retrieval accuracy**, removing rebuilds as the knowledge base grew.
- Refined cross-encoder reranking to select the **15 most relevant cases from 50 retrieved candidates**, weighting cases by whether they resolved the issue.
- Replaced rarely used rating buttons with implicit feedback tracking on repeat questions and unanswered threads, flagging weak answers for review.

United States Forces Korea

Camp Humphreys, South Korea

Provost Marshal Interpreter

October 2024 – April 2026

- Automated Korean criminal record translation in JavaScript for **250+ background checks weekly**, cutting processing time from **3 days to 3 hours**.
- Established the tool as the standard process for the Provost Marshal Office and Korean National Police, still active across both organizations.
- Served as the **sole** Korean-English interpreter for a U.S. Army Colonel at a four-star headquarters, delivering **50+ high-stakes briefings** with Korean military and national police counterparts.
- Led and mentored 10 KATUSA soldiers through daily assignments with zero disciplinary incidents.

PROJECTS

KELD - Korean English Legal Dictionary (keld.vercel.app)

Python, FastAPI, React, AWS Lambda, API Gateway, OpenAI

- Designed a two-layer pipeline that resolves 130+ curated legal terms from a local dictionary, calling the OpenAI API only for unmatched terms to reduce cost.
- Launched the translation API on AWS Lambda and API Gateway with zero idle cost, scaling to demand.

Quorum - Live Group Movie Voting (quorum-client.onrender.com)

Node.js, Express, React, Socket.io, MongoDB, JWT

- Developed a real-time voting app that syncs votes across concurrent WebSocket sessions, pushing updates to every connected client without HTTP polling.
- Debugged a WebSocket state desync by replacing in-memory session state with database-first hydration, keeping vote history consistent across sessions.