

BEREKET ASSEFA

☎ 010-2187-9779 📍 Gwanak-Gu, Seoul ✉ bereketsiyum@gmail.com
🌐 Portfolio

EDUCATION

Korea Advanced Institute of Science and Technology (KAIST)
Bachelor of Science in Electrical Engineering and Computer Science (Double Major)

Aug 2017 – Feb 2022
Daejeon, South Korea

Relevant Coursework

- | | | | |
|-------------------|---------------------|------------------------|------------------------|
| • Algorithms | • AI | • Software Engineering | • Security |
| • Data Structures | • Operating Systems | • Database | • Advanced Programming |

Career ([View Details](#))

EMOCOG | 🌐 [Website](#)

Aug 2022 - Dec 2024

• Mobile Application Development:

- * Developed a location-tracking app using **React Native**, **Node.js**, and **Socket.io**.
- * Designed and implemented applications for Parkinson's disease testing incorporating swipe, touch, and speech tests using **React Native**.

• Cogthera Backend:

- * Added audit logging using PostgreSQL triggers within OAuth 2.0-compatible authentication server.
- * Integrated German language model using VOSK, reducing latency by **50%**.
- * Built secure service aggregating real-time data using FastAPI and WebSockets.

• Laboratory Information Management System:

- * Developed API endpoints for Authentication, Core, and Language Servers, Text-to-Speech Server using **Python FastAPI** and microservice architecture deployed on **Kubernetes** for Cogthera, a German subsidiary of Emocog.
- * Led the development of an asynchronous **Text-To-Speech(TTS)** server utilizing caching of audios in **AWS S3** compatible Cloud Storage **Scaleway**.
- * Enhanced the **VOSK(open source)** and **GRPC** based **Speech-To-Text (STT)** efficiency, speed, and accuracy by adapting model words from our own language server.

Projects ([View Details](#))

Content Platform | 📄 [Source Code](#) | 📺 [Demo Video](#)

- Developed a Flask Web App with **Bootstrap** and **jQuery** for language learning flashcards featuring instant translation using **NAVER Papago API**.
- Integrated **CRUD** operations with a **PostgreSQL** database and secured user access with **Auth0**, following **TDD** practices.
- Containerized using **Docker** and deployed on **AWS** with JWT-based user authorization.

Content Gen Server | 📄 [Source Code](#) | 📺 [Demo Video](#)

- Engineered a real-time chat application using **Node.js**, **Express.js**, and **Socket.io** with **Bootstrap** and **jQuery** interface.
- Employed a microservices architecture with **MySQL** and **MongoDB** databases, orchestrated using **Docker Compose** and deployed on **GKE (Google Kubernetes Engine)**.

Technical Skills

Languages: Python, JavaScript, C/C++

Technologies/Frameworks/databases: FastAPI, Next.js, React, React-Native, HTML/CSS, SQL (PostgreSQL), NoSQL (Firestore), AWS S3 Protocol, Linux, Git, Docker, Docker Compose, Kubernetes.

Cloud Providers: AWS, Google Cloud.