BEREKET ASSEFA

+8210-2187-9779   bereketsiyum@gmail.com   Seoul, South Korea   Portfolio

Education

- **Korea Advanced Institute of Science and Technology (KAIST)**   Aug 2017 – Feb 2022
  B.S. Electrical Engineering and Computer Science (Double Major)   *Daejeon, South Korea*

Career (More Details)

- **Emocog Inc. (Website)**   Aug 2022 – Dec 2024
  Software Engineer   *Seoul, South Korea*
  - Partnered with Emocog's German subsidiary to design a scalable **microservice-based backend architecture** while achieving **ISO 27001** compliance.
    * Implemented **audit logging** using **PostgreSQL** triggers to enhance security and compliance tracking.
    * Optimized real-time **speech-to-text** systems using **VOSK**, an open-source speech toolkit, and **gRPC**, reducing memory, CPU usage, and latency by **over 50%**.
    * Deployed a self-hosted **Sentry** instance for robust error monitoring in the mobile application and implemented an asynchronous **Text-To-Speech** server.
    * Created a real-time dashboard with **FastAPI** and **WebSockets** to aggregate and visualize data from various microservices.
  - Automated laboratory workflows by building a laboratory management system using **Next.js** and **Firestore**, replacing Excel sheets with a fully automated solution.
  - Developed a cross-platform mobile app with **React Native** and a **FastAPI RESTful API** as the backend, alongside an admin dashboard powered by **React**.

Projects (More Details)

- **AI-Powered Content Management System (Live Site) (Source Code)**   2024
  Next.js Application
  - Developed a scalable **Next.js** content platform featuring **Tiptap** for rich-text editing, enabling users to create posts and drafts.
  - Integrated AI content generation via **Content Gen Server** and self-hosted the platform using **Docker** and **Coolify**.
  - Designed an intuitive user interface to enhance the content management experience.

- **Content Gen Server (Description) (Source Code)**
  FastAPI Microservice
  - Built a robust **FastAPI** microservice for AI content generation, integrating **OpenAI** and **Flux**.
  - Implemented **role-based access control**, used **PostgreSQL**, **MinIO**, and **Redis** for efficient content management.
  - Deployed via **Docker Compose** and **Coolify**, ensuring seamless and efficient hosting.

Certifications (More Certifications)

- **Database Design and Basic SQL in PostgreSQL**   2024
  University Of Michigan

- **Advanced React with TypeScript**   2024
  Total Typescript

Technical Skills

- **Languages:** Python, Javascript/TypeScript, C/C++.
- **Backend:** FastAPI, PostgreSQL, NodeJS, REST APIs, gRPC.
- **Frontend:** React, React Native, Next.js, Tailwind CSS, HTML/CSS.
- **DevOps & Cloud:** Docker, Docker Compose, Kubernetes, AWS, Google Cloud.
- **Databases:** PostgreSQL, Firestore, Redis.
- **Tools:** Linux, Git, VSCode.