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CONTACT

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EDUCATION

Korea University   **Seoul, South Korea**
B.S. in Electrical and Electronics Engineering   March 2019 – February 2023
GPA - 4.02 / 4.5 (*magna cum laude*)
Publications
- Sudi Murindanyi, Kyamanywa Hamza, et al. (2023). Responsible Music Genre Classification using Interpretable Model-agnostic Visual Explainers. 4th ICDSA 2023 in Springer Nature Computer Science Journal. *[preprint 2024]*

PROFESSIONAL EXPERIENCE

Bebridge Inc.   **Seoul, South Korea**
Senior Software Engineer (Level 4) - B2B & LLM OPs Engineering Team Led   Jan 2024 – Present
- **Developed server-side video screenshot solution** using FFmpeg and AWS Lambda, overcoming mobile platform stream API restrictions and **enabling video note-taking app launch on iOS and Android** and **increasing user base by 21%**.
- **Prototyped & developed end to end LLM and Whisper-based auto-notes feature**, **increasing** videos opened for note-taking by **12% (core feature)**, **increased** overall **user retention by 25%**, and mobile app **day-to-day retention by 40%**
- **Developed a novel semantic note searching feature** leveraging vector embeddings and Pinecone vector database, Google Cloud Run, and AWS EventBridge, resulting in a **32% improvement** in search-to-note bounce rate and an **12% increase** in user session duration and note review events.

Bebridge Inc.   **Seoul, South Korea**
Software Engineer (Level 3) - Research and Development   July 2023 – December 2023
- **Built a highly scalable, event driven cloud-based** LLM video summarization engine that achieved **1,500 Monthly Active Users (MAU)**, **25% weekly retention rate**, and **daily summarization of over 1,000 videos** within the first 3 months of launch.
- **Reduced** video summarization cost by **over 40%** through implementing summary result caching and replacing the transcription stage with YouTube API-fetched transcripts, significantly **improving cost efficiency.**
- **Improved** video summarization **speed by 66%** via video chunking, parallel transcription, and parallel summarization. **Reduced** time to text result through lazy evaluation, prioritizing the delivery of key text information before images.
- **Designed a robust and scalable** deployment pipeline for the summarization service using AWS Lambda event-driven architecture and Docker containerization, simplifying the deployment process and **reducing compatibility issues to zero**.
- **Contributed** to various **open-source libraries** utilized in projects, including **Langchain, Vercel AI SDK, Quivr, and Pytube.**
- **Awarded** Bebridge-Slid Hero Award 2023**, promoted to level 4 engineer.**

Bebridge Inc.   **Seoul, South Korea**
Software Engineer (Level 2) - Project Level Engineer   June 2022 – July 2023
- **Developed RAG-based chatbo**t for contextualized note access and personalized support **increasing session duration by 25%**.
- **Designed and developed a robust cross-platform** authentication system using AWS Cognito seamlessly supporting the React Web App, Chrome extension, and mobile and desktop applications. **Reduced authentication issues by 98%.**
- **Led development of real-time video transcription**, increasing **premium subscriptions by 51%** and **customer acquisition by 20%**.
- **Engineered user-behavior monitoring React hooks**, accelerating **hypothesis evaluation by 35%**.
- **Implemented** universal export feature with **96% format conversion accuracy**, **reducing support inquiries by 98%**.
- **Optimized website performance** through lazy loading and leveraging browser-optimized content types, **reducing load time by 57%** and **improving SEO**.
- **Contributed** to critical **open-source** projects: **EditorJS and ReduxJS.**
- **Awarded** Bebridge-Slid Hero Award 2022**, promoted to level 3 engineer.**

AWARDS AND HONORS

- **Bebridge-Slid Hero Award** (2 years in a row)   December 2022, December 2023
- **Korea University Academic Excellence Award**   July 2020
- **Korea University Dean's List** (3 semesters)   July 2020, Jan 2020, July 2019
- **Global Korea Scholarship Award** (Awarded to only two Ugandan students annually)   February 2018 - February 2023
- **Ugandan Government Scholarship Award**   August 2017

OPEN-SOURCE CONTRIBUTIONS

- Contributor to **Langchain** - a framework for developing applications powered by language models (69.9 K stars).
- Contributor to **EditorJS** - an open-source text editor that outputs clean JSON (25.1 K stars).
- Contributor to **Redux Toolkit** - the official, opinionated, batteries-included toolset for efficient Redux development (10.5 K stars).
- Contributor to **Vercel AI SDK** - a library for building AI-powered streaming text and chat UIs. (8.3 K stars).
- Contributor to **MemGPT**- framework to build LLM agents with long term memory & custom tools. (10.6 K stars).
- Contributor to **Pytube**- a dependency-free Python library (and command-line utility) for downloading YouTube videos. (10.5 K stars)

SKILLS & LANGUAGES

- **Languages:** Python, Javascript / Typescript, C++, SQL
- **Frontend Frameworks**: ReactJS, NextJS, TailwindCSS
- **Backend Frameworks:** FastAPI, Django
- **Platforms**: Mobile (React Native), Chrome Extension, Web (ReactJS), Desktop (ElectronJS)
- **Machine Learning:** Langchain, Pytorch, Keras, Vercel AI SDK
- **Databases:** MySQL, Postgresql, MongoDB, Firebase, Supabase, SQLAlchemy, Alembic
- **Other:** Agile/SCRUM, Linux, Git, AWS services, Google Cloud Platform (GCP), FFmpeg, MQTT, RabbitMQ, Docker

Languages: Korean *(Fluent, TOPIK 5)*, **Luganda** *(Native language spoken in Uganda)*, **English** *(TOEFL Score: 111, IELTS Score: 7.5)*