

Hyojoon Shin

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Seoul, Republic of Korea

RESEARCH INTERESTS

data science, bioinformatics

EDUCATION

Korea University

B.E in Computer Science and Engineering

- GPA: 3.91/4.5

Mar.2018 – Feb.2024

Seoul, Republic of Korea

WORK EXPERIENCE

Medical AI

Associate Researcher

Jan.2024 - Present

Seoul, Republic of Korea

- **AitiaLVSD On-Device App: In-House Android Mobile App:** Constructed overall structures of Android application; organized display screen into: (1) model selection, (2) data selection, (3) ECG graph, (4) data information, (5) inference result; optimized model to occupy only 200MB of device storage
- Converted Python model to Android environment using TorchScript trace method
- Configured data serialization system using Apache Avro
- Implemented automated pipeline for Gitlab CI/CD job

Medical AI

Intern

Sep.2023 - Dec.2023

Seoul, Republic of Korea

- **Aitia-Series Management: In-House Software Remote Monitoring System:** Scrutinized possible options in cloud monitoring system with pros and cons; designed management system in Kubernetes environment with Microsoft Azure
- Organized Grafana open source to monitor data in dashboard; identified minimum scope of dashboard necessary to hospital; monitored 15k+ data monthly, implementing error alarm system via email
- Launched monitoring system at Sejong hospital; optimized operational costs and established role-based access control for essential accounts, reducing monthly cost to 300k

Antigravity

Research Associate

Jun.2023 - Aug.2023

Seoul, Republic of Korea

- **3D Statistical Human Modeling:** Designed human mesh segmentation and visualization with Python
- Devised distance matrix to minimize the discrepancy in source-target mesh
- Implemented MLP model to shorten the source-target human mesh correspondence time to 40 percent

PROJECTS

NQ-DPR-hard Benchmark - Elicit Ability of Language Model for Query Expansion

Mar.2023 - Jun.2023

- Designed overall bm25 score pipeline and analyzed Natural Question dataset collected by Google search engine
- Implemented new benchmark dataset with reranker model, improved with 15 percent of recall score

Custom Coloring AI Design For Child Counseling

Jul.2022 - Aug.2022

- Performed overall model pipeline using pix2pix to generate coloring image from sample sketches and demo-service website for demonstration
- Optimized model performance and reduced 30 percent of generation time by fine-tuning the pix2pix architecture on custom datasets

LEADERSHIP AND EXTRACURRICULAR ACTIVITIES

AKUSSA (Association of Korea University Students Studying Abroad)

Jan.2025 - Present

President

Seoul, Republic of Korea

- Organized seminar for recruitment process, founded alumni networking
- Held regular meeting session for people to communicate about studying abroad
- Cooperated with The Kwanjeong Educational Foundation to share joined seminar information session, regular meetings

DevKor (Korea University Software Development Club)

Sep.2022 - Dec.2023

Finance Manager

Seoul, Republic of Korea

- Led recruitment interviews proactively by organized questions, interviewing 100+ participants every semester
- Managed all funds required for club events and cooperated closely with the dean to decide on incentives for club activities

Korea University Software Education Camp

Jan.2023 - Feb.2023

Mentor

Seoul, Republic of Korea

- Taught basic python programming to middle school students, covering foundational concepts such as variables, conditionals, and functions
- Programmed students to comprehend basic problem-solving logic by guiding them through small coding projects and debugging processes

LANGUAGE PROFICIENCY

Korean: Native

English: Fluent

TOEFL: 105 (R: 27 L:25 S: 29 W: 24)

GRE: V: 160 Q: 170 AW: 3.5

SKILLS

Programming: Python, C++, Kotlin, SQL

Data Monitoring: Grafana, Kibana, ElasticSearch

Infra: Kubernetes, Microsoft Azure, AWS