Suro Lee

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Education

Columbia University Dec 2023 (expected)
Master of Science – Computer Science, Machine Learning Track *New York, US*

Korea Advanced Institute of Science and Technology (KAIST) Feb 2022
Bachelor of Science – Computer Science, Specialization in Artificial Intelligence *Daejeon, Korea*
Minor in Electrical Engineering

Relevant Coursework

Math: Real Analysis, Linear Algebra, Probability and Statistics, Differential Equations

Machine Learning: Computational Learning Theory, Statistical Learning Theory, Machine Learning, Artificial Intelligence, Computer Vision, AI Based Software Engineering, Natural Language Processing

Experience

Columbia University Sept 2022 – Dec 2022
Teaching Assistant, Computing for Business Research *New York, US*

- Supported 70+ graduate students in Python, MATLAB, C, Bash, R, MySQL, TensorFlow, and Git by holding weekly office hours
- Code-reviewed and provided feedback for biweekly programming assignments

Samsung Research Jan 2022 – Jul 2022
Software Engineer, Visual Perception Team *Seoul, Korea*

- Integrated various cutting-edge AI research from Samsung AI centers around the around into an interactive AI recipe navigation web demo using Node.js, Flask, Svelte, and Bootstrap
- Facilitated communication between AI modules and the server through MQTT and flexbuffers
- Developed an ingredient detection demo that uses a projector to display detection results on a kitchen table
- Both demos featured at Samsung Research Open Lab 2022

KAIST INA Lab Feb 2021 – Sep 2021
Undergraduate Researcher *Daejeon, Korea*

Project: Content-Aware and Task-Aware Variable Rate Image Compression using Compressive Autoencoders

- Exploited content-specific redundancies by training a compressive autoencoder with a dataset consisting of only one type of content such as faces (i.e., CelebA Dataset), achieving up to 2% improvement in terms of PSNR
- Optimized the compressive autoencoder for a task-specific loss instead of a perceptual loss, which outperformed JPEG in image classification up to 11% in terms of accuracy for low resolution images

Koh Young Technology Mar 2019 – Aug 2019
Research Intern, Machine Intelligence Team *Yongin, Korea*

- Implemented a prototype for a distributed, real-time SMT (surface-mount technology) inspection process using Apache Kafka, Apache Spark, and Apache HBase—which was later developed into a successful full-fledged product
- Achieved up to 10x speed up from batch processing, significantly decreasing the number of defects in the solder paste printing process

Extracurricular Activities

2022 ICPC Columbia University Local Contest Sep 2022

- 15^{th} out of 112 participants; solo contest

Technical Skills

Languages: Python, C++, C
Machine Learning: PyTorch, TensorFlow
Web Development: HTML, CSS, Svelte, Flask, Bootstrap, Node.js
Mobile Development: Android Studio, Flutter, Unity
Distributed Systems: Apache Kafka, Apache Spark, Apache HBase
Developer Tools: Docker, GitHub