jinsun-yoo.github.io
linkedin.com/in/jinsun-yoo

Jinsun Yoo

Jinsun.official@gmail.com
(470) 812-6042

EDUCATION

Georgia Institute of Technology — Atlanta, GA
Ph.D Student, School of Computer Science — *Expected Graduation: May 2026*

- Concentrations: Edge Computing (Distributed Systems & Hardware Accelerators)
- Advisors: Umakishore Ramachandran, Tushar Krishna

Seoul National University — Seoul, Korea
Bachelor of Business Administration — *Mar 2014 – Feb 2021*
Bachelor of Science in Computer Science and Engineering

- GPA: 3.99 / 4.3 (Summa Cum Laude)

WORK EXPERIENCE

MOLOCO — Seoul, Korea
Software Engineer (Full time) — *Jan 2021 – Jul 2021*
Software Engineer (Internship) — *Jan 2020 – Aug 2020*

- Maintained and expanded a **2.5 million QPS** system on **GCP** in the AdTech industry, solving technical challenges
- Saved **$150K/month** by designing, coordinating, and deploying a company wide monitoring system reform
- Reduced approx. **66% memory** of an entity and improved **scalability and code quality** by redesigning the entity
- Identified causes of internal congestion by measuring the impact of heterogeneous requests on a single microservice
- On-call duty for global infrastructure: maintained system health by finding and solving issues at an early stage
- Teambuilding: spread knowledge in **tech talks**, facilitated **inter-team product discussions**, and actively engaged in **code review**

RESEARCH EXPERIENCE

Georgia Institute of Technology — Atlanta, GA
Graduate Research Assistant — *Aug 2021 - Present*

- Exploring the design space for edge nodes in support of situation awareness applications
- Designing TPU multiplexing to maximize resource utilization in constrained edge environments

Seoul National University — Seoul, Korea
Research Assistant — *Sep 2020 – Dec 2020*

- Evaluated how a distributed Redis cluster shows improved performance over a single node configuration
- Proposed improvements to redis-benchmark as a tool to measure the performance of cluster configurations

Seoul National University — Seoul, Korea
Research Assistant — *Jul 2019 – Oct 2019*

- Assessed the performance enhancement of Samsung SmartSSD, a Near Data Processing device which transfers data directly from SSD to on board FPGA
- Designed and verified a model to estimate the difference with Near Data Processing, leading to a publication

PROJECTS

Implemented CAROUSEL, an **egress rate limiter** in SHENANGO, a system that reallocates CPU cores for **short latency based on ingress traffic**, and measured the combined performance and functionality — *Oct 2021*

Advanced OS Course Project: Implementing **virtual memory & CPU Scheduler**, **barrier,** RPC based server — *Fall 2021*

Weight Pruning on BERT4REC: Used weight magnitude method to prune weights of BERT4REC, showing 5x compression rate with minimal accuracy loss — *Dec 2019*

OS Course Project: Implemented new system call based on ptree, **CPU Scheduler**, **kernel lock primitive** — *Fall 2019*

PUBLICATION

J.Yoo, Y.Kim, and J.Kim, ”An Assessment Model and its Usage for SmartSSD”, KSC, 2019.

SKILLS

Programming Languages: Go, C/C++, Python, SQL(basic)
Technologies: GCP, Linux Kernel, Docker, Git/Github, MS Azure, CI/CD(Jenkins, Travis), Datadog