SANGJUN SON

lucetre
1, Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea, 08826
✉ lucetre@snu.ac.kr ✆ +82 10 3831 0094 lucetre.github.io

INTERESTS

I am currently working as **Site Reliability Engineer** at *MOLOCO* and also interested in **Machine Learning**, **Data Mining**, **Blockchain** and **Business Development**.

WORKING EXPERIENCES

Site Reliability Engineer, *MOLOCO, Engineering* Jul. 2022 - Now

- **Docker Image Optimization**: Achieved an 80% decrease in image vulnerabilities, a 94% reduction in misconfigurations, and zero instances of secret exposures, as reported by the Datadog monitoring dashboard. Improved developer experience by significantly enhancing deployment speed with images that are 5.2 times lighter in both actual and GCR-compressed size. This improvement has resulted in faster CI/CD processes, specifically a 4.96x reduction in pod pulling time.
- **Migrate Service Images from GCR to GAR**: Monitored GAR intercontinental egress, restricting network traffic to within the same regions, resulting in a notable reduction of approximately 74.62% in the GCS bucket network egress fee, including GCR image transfer costs, measured in terms of SKUs. The migration to GAR for all DSP microservices resulted in faster rollout and rollback times with the image streaming feature, while decreasing image pulling time per pod by approximately 150 ms.
- **Canary Deployment for Critical Services**: Contributed to achieving 99.99% uptime in critical microservice operations by implementing strategies like canary pool creation with taints, Helm updates for Kubernetes tolerations, GLB setup for traffic distribution, canary and production deployment pipelines in Harness, and a composite monitor in Datadog for canary checks.

Engineer Intern, *NFTBank, Backend Team* Dec. 2021 - Feb. 2022

- Deployed a scholar resume web-application for scholarship application in Axie Infinity. Developed an automated payout service for scholarship managers.

Google Software Engineering Intern, *Google Korea LLC., Desktop Search Team* Jun. 2021 - Sep. 2021

- Automatic I2F and nesting config generation for hOSRP to diOSRP conversion: Designed an internal tool for efficient development in OSRP migration.

EDUCATION

Seoul National University, *Seoul, Republic of Korea* Mar. 2016 - Aug. 2022
B.S. in Computer Science and Engineering
Interdisciplinary Major in Entrepreneurship

Daegu Science High School, *Daegu, Republic of Korea* Mar. 2013 - Feb. 2016
High School Diploma, Natural Sciences

PUBLICATIONS

Sangjun Son*, Yongchan Park*, Minyong Cho, and U Kang,
"**DAO-CP: Data-adaptive online CP decomposition**," *PLOS ONE 2022*,
(* Both authors contributed equally to this work)

Dawon Ahn, **Sangjun Son**, and U Kang,
"**Gtensor: Fast and Accurate Tensor Analysis System using GPUs**," *CIKM 2020*,
29th ACM International Conference on Information and Knowledge Management, Virtual Event, Ireland

RESEARCH EXPERIENCES

Data Mining Laboratory, *Seoul National University* Nov. 2019 - Feb. 2021
Undergraduate Research Internship (Advisor: Prof. U Kang)

- **Gtensor**, **BIGtensor**: Accelerated large-scale tensor analysis on heterogeneous system.
- **DAO-CP**: Enhanced accuracy for CP decomposition of time-evolving tensors by a data-adaptive algorithm.

Real-Time Ubiquitous Systems Laboratory, *Seoul National University* Jul. 2017 - Feb. 2018
Undergraduate Research Internship (Advisor: Prof. Chang-Gun Lee)

- Implemented simulation to study effects of AED delivery using unmanned vehicle transport technology on defibrillation in out-of-hospital cardiac arrest.

TEACHING EXPERIENCES

Logic Design & Web Development, *31th Peer Tutoring Program in College of Engineering* Spring. 2022

International Students Integrated Peer Tutoring Program, *Undergraduate Student Tutor* Spring. 2021
Data Structures & Algorithm Fundamentals, SNU Gwanak Residence Halls

Digital Computer Concept and Practice, *Lab Class Lecturer* Fall. 2020
Introduction to Python and Its Application, Dept. of Computer Science and Engineering

Basic Computing: First Adventures in Computing, *Teaching Assistant* Fall. 2020
Python Basics, SNU Faculty of Liberal Education

Basic Calculus 1, *Undergraduate Student Tutor* Spring. 2020
TA Office of the Department of Mathematical Sciences

SOFTWARE

Scholar Resume, *SPA for Axie Infinity Scholarship Application* Jan. 2022 - Feb. 2022
Resume page depicting scholars' game career, including ranks, MMR, and earned SLP history

BIGtensor, *Contributor of BIGtensor-GPU and Hadoop* Nov. 2019 - Feb. 2021
Tensor mining packages for large-scale tensor analysis

Drone Transfer Simulator Jul. 2017 - Feb. 2018
Simulation of AED drone delivery to defibrillation for patients with out-of-hospital cardiac arrest

PROJECTS

LinkedArt, *College of Art Exhibition Archive Platform* Spring. 2022
Created an artwork sales channel between buyers and artists and provided a networking community of college of art undergraduate/graduate students to build their careers.
Operated Next.js and NestJS for front-end and back-end frameworks with PostgreSQL DB as a full-stack engineer.
Built an automated deployment pipeline via Vercel and Heroku cloud application platforms.

Seoul Bike Transit, *Spatial Geography Information Research using qGIS* Spring. 2022
Analyzed validity and efficiency of public transportation system w/ Seoul public bicycle service *Ttareungyi*.
Defined standards of a good route in safety, time, distance, exercise, cost, and transit counts.
Visualized *Ttareungyi* routes compared to those only using public transport via a live demo.

MopReM: Moiré Pattern Removal for Mobile, *Texts/Diagrams on Single-colored Background* Fall. 2021
Established a efficient module for mobile cameras specialized in demoireing re-captured screen materials.

Deep Learning-based Wrinkle Detection, *Morpheus3D* Fall. 2020
Built new models to segment wrinkle parts in 3D scanned face images by exploiting state-of-the-art methods.

ABC, *Art with Block-Chain: Media-art Platform* Spring. 2020
Designed a platform where any creator can upload their own media arts and increase profits.
Implemented smart contract on ERC-721 token that records artwork metadata and p5.js-based contents on blockchain.

BusyWrite, *Team Writing Solution to Accelerate Collaboration* Fall. 2017
Implemented a concept of a unit of thought that users write on, called *Bubble*, and enabled users to write simultaneously and merge after resolving conflicts.

HONORS and AWARDS

ACM ICPC Regional Contest Seoul, *ACM ICPC Gogle Team*, 15th place Nov. 2021

Merit-based Scholarship (full amount), *Seoul National University* Fall. 2020 - Spring. 2021

SNU Development Fund Scholarship, *Seoul National University* Spring. 2017 - Fall. 2017

Korea Olympiad in Informatics, *National Programming Contest for High School Students* May. 2015
Silver medal, 3rd place

EXTRA-CURRICULAR ACTIVITIES

WD Partners, *Consulting Firm providing Indoor Ventilation Solution* Jun. 2021 - Dec. 2021
Demonstrated optimal condition for high ventilation efficiency through CFD analysis for pollutants. (e.g., fine dust and droplets containing viruses).
Built a prototype device using Coanda effect for real-world validation.

Decipher, *Blockchain Research Group in Seoul National University* Mar. 2020 - Aug. 2020
Attended weekly seminars about various blockchain topics as a member of StuDeFi.
Designed a donation platform, AID-U for contributing student education expenses.

Republic of Korea Army, *Obligatory Military Service* Feb. 2018 - Oct. 2019
Discharged on full-term military service
Occupational specialty: administration, communication equipment operation, chaplaincy