# SANGJUN SON

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## INTERESTS

Site Reliability Engineer at Moloco with a background in B.S. degrees in Computer Science and Entrepreneurship as an interdisciplinary major from Seoul National University. Adept in engineering (Backend & DevOps) and business development, with a keen interest in exploring emerging technologies and actively engaging in discussions with others.

## WORKING EXPERIENCES

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

- Achieved an 80% decrease in Docker image vulnerabilities, a 94% reduction in misconfigurations, and zero instances of secret exposures through Datadog monitoring, while significantly enhancing deployment speed with 5.2 times lighter images, leading to a 4.96x reduction in pod pulling time; additionally, successfully migrated to Google Artifact Registry (GAR) for all microservices, resulting in a 74.62% reduction in GCS network egress fees and faster rollout/rollback times.
- Implemented canary deployment with Load Balancing, Datadog composite monitor for proactive issue detection, Helm manifests for resource allocation, and separated deployment pipelines in Harness to achieve over 99.99% service uptime and enhanced user engagement through Slack notifications.

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

- Designed and developed Scholar Resume, a single-page application for Axie Infinity scholarship applicants, featuring a comprehensive display of scholars' game career, including ranks, MMR, and earned SLP history.
- Integrated an automated payout service enabling scholarship managers to efficiently distribute earned SLP rewards to players within each scholarship program.

**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.

## PUBLICATIONS

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

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

## 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

## RESEARCH EXPERIENCES

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

- **BIGtensor** (**Gtensor**): Accelerated large-scale tensor analysis on heterogeneous systems by developing and releasing Tensor mining packages, utilizing GPU and Hadoop computation for efficient processing of large-scale tensor data.
- **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)

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

## TEACHING EXPERIENCES

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

## SOFTWARE and 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.

## HONORS and AWARDS

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

**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.