SANGJUN SON

lucetre

INTERESTS

I am interested in Machine learning, Data mining, Tensor analysis, Blockchain, Web development and Site reliability engineering.

EDUCATION

Seoul National University, Seoul, Republic of Korea

B.S. in Computer Science and Engineering
Interdisciplinary Major in Entrepreneurship

Mar. 2016 - Aug. 2022

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

WORKING EXPERIENCES

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

Deployed a scholar resume web-page for scholarship application.

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.

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.

SKILLS

Programming Languages

C++, Python, Java, MATLAB, R, Typescript (welcome to any languages)

Frameworks & Tools

PyTorch, React, Next.js, Django, NestJS, OpenCL, OpenGL,

Hadoop, Google Functions, Apache Airflow

Languages Korean (native), English

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.