SANGJUN SON

lucetre

1, Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea, 08826

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

Daegu Science High School, Daegu, Republic of Korea

High School Diploma, Natural Sciences

Mar. 2016 - Aug. 2022

Mar. 2013 - Feb. 2016

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 Automatic I2F and nesting config generation for hOSRP to diOSRP conversion:

Designed an internal tool for efficient development in OSRP migration.

Jun. 2021 - Sep. 2021

RESEARCH EXPERIENCES

Data Mining Laboratory, Seoul National University

Research Internship (Advisor: Prof. U Kang)

Nov. 2019 - Feb. 2021

- 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

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

Python Basics, SNU Faculty of Liberal Education

Fall. 2020

Basic Calculus 1, Undergraduate Student Tutor

TA Office of the Department of Mathematical Sciences

Spring. 2020

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

 $\label{eq:continuous} Analyzed \ validity \ and \ efficiency \ of \ public \ transportation \ system \ w/ \ Seoul \ public \ bicycle \ service \ \textit{Ttareungyi}.$

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, Pub/Sub, 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

KASTTC, KwanAkSa Table Tennis Club

Managed competitions and weekly training as a club's supervisor.

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. Problem Solving in SNU, Study Group for Coding Interview Jun. 2021 - Sep. 2021 Managed weekly practices and workshops to share and learn skills and strategies. 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. Paik's Beer Dec. 2019 - Mar. 2020 Served beer and snacks as a part-time job after school. Republic of Korea Army, Obligatory Military Service Feb. 2018 - Oct. 2019 Discharged on full-term military service Occupational specialty: administration, communication equipment operation, chaplaincy

Dec. 2016 - Dec. 2017