SANGJUN SON

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RESEARCH INTERESTS

My research focuses on **Machine learning**, **Data mining**, **Computer vision**, and **Tensor analysis**.
I am also interested in **Blockchain** and **Business planning**.

EDUCATION

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

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

WORKING EXPERIENCES

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

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

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

RESEARCH EXPERIENCES

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

- **Gtensor**, **BIGtensor**: Accelerated large-scale tensor analysis on heterogenous 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 unmaned 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 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

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

COURSE PROJECTS

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, which records its metadata and p5.js-based content 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, Scala, Solidity, R (Welcome to any languages)
Frameworks	PyTorch, Tensorflow, React, AngularJS, Django OpenCL, OpenGL, Hadoop, MFC

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
Demonstrate 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

KASTTC, *KwanAkSa Table Tennis Club* Dec. 2016 - Dec. 2017
Managed competitions and weekly training as a club's supervisor