

# SANGJUN SON

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## WORK & RESEARCH INTERESTS

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I am specialized in **Machine learning**, **Data mining**, **Computer vision** and **Tensor analysis**.  
I am also interested in **Blockchain**, **Business planning** and **Web development**.

## EDUCATION

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**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

## PUBLICATIONS

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**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

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**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

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**Data Mining Laboratory**, *Seoul National University* Nov. 2019 - Feb. 2021  
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  
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

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**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

<b>Basic Computing: First Adventures in Computing</b> , <i>Teaching Assistant</i> Python Basics, SNU Faculty of Liberal Education	Fall. 2020
<b>Basic Calculus 1</b> , <i>Undergraduate Student Tutor</i> TA Office of the Department of Mathematical Sciences	Spring. 2020

## SOFTWARE

<b>Scholar Resume</b> , <i>SPA for Axie Infinity Scholarship Application</i> Resume page depicting scholars' game career, including ranks, MMR, and earned SLP history	Jan. 2022 - Feb. 2022
<b>BIGtensor</b> , <i>Contributor of BIGtensor-GPU and Hadoop</i> Tensor mining packages for large-scale tensor analysis	Nov. 2019 - Feb. 2021
<b>Drone Transfer Simulator</b> Simulation of AED drone delivery to defibrillation for patients with out-of-hospital cardiac arrest	Jul. 2017 - Feb. 2018

## COURSE PROJECTS

<b>MopReM: Moiré Pattern Removal for Mobile</b> , <i>Texts/Diagrams on Single-colored Background</i> Established a efficient module for mobile cameras specialized in demoireing re-captured screen materials.	Fall. 2021
<b>Deep Learning-based Wrinkle Detection</b> , <i>Morpheus3D</i> Built new models to segment wrinkle parts in 3D scanned face images by exploiting state-of-the-art methods	Fall. 2020
<b>ABC</b> , <i>Art with Block-Chain: Media-art Platform</i> 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	Spring. 2020
<b>BusyWrite</b> , <i>Team Writing Solution to Accelerate Collaboration</i> Implemented a concept of a unit of thought that users write on, called <i>Bubble</i> , and enabled users to write simultaneously and merge after resolving conflicts	Fall. 2017

## SKILLS

<b>Programming Languages</b>	C++, Python, Java, MATLAB, Scala, R (Welcome to any languages)
<b>Frameworks &amp; Tools</b>	PyTorch, Tensorflow, React, AngularJS, Django, NestJS OpenCL, OpenGL, Hadoop, MFC, Google Functions, Pubsub, Airflow

## HONORS and AWARDS

<b>ACM ICPC Regional Contest Seoul</b> , <i>ACM ICPC Gogle Team</i> , 15th place	Nov. 2021
<b>Merit-based Scholarship (full amount)</b> , <i>Seoul National University</i>	Fall. 2020 - Spring. 2021
<b>SNU Development Fund Scholarship</b> , <i>Seoul National University</i>	Spring. 2017 - Fall. 2017
<b>Korea Olympiad in Informatics</b> , <i>National Programming Contest for High School Students</i> Silver medal, 3rd place	May. 2015

## EXTRA-CURRICULAR ACTIVITIES

<b>WD Partners</b> , <i>Consulting Firm providing Indoor Ventilation Solution</i> 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	Jun. 2021 - Dec. 2021
<b>Problem Solving in SNU</b> , <i>Study Group for Coding Interview</i> Managed weekly practices and workshops to share and learn skills and strategies	Jun. 2021 - Sep. 2021
<b>Decipher</b> , <i>Blockchain Research Group in Seoul National University</i> Attended weekly seminars about various blockchain topics as a member of StuDeFi Designed a donation platform, AID-U for contributing student education expenses	Mar. 2020 - Aug. 2020

<b>Paik's Beer</b> Served beer and snacks as a part-time job after school	Dec. 2019 - Mar. 2020
<b>Republic of Korea Army, <i>Obligatory Military Service</i></b> Discharged on full-term military service Occupational specialty: administration, communication equipment operation, chaplaincy	Feb. 2018 - Oct. 2019
<b>KASTTC, <i>KwanAkSa Table Tennis Club</i></b> Managed competitions and weekly training as a club's supervisor	Dec. 2016 - Dec. 2017