# SANGJUN SON

## lucetre

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#### RESEARCH INTERESTS

Machine Learning, Data Mining, Tensor Analysis

## **EDUCATION**

Seoul National University, Seoul, Republic of Korea

Candidate for B.S. in Computer Science and Engineering

Interdisciplinary Major in Entrepreneurship

Daegu Science High School, Daegu, Republic of Korea

Mar. 2016 - Present

Mar. 2013 - Feb. 2016

# **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

Research Internship (Advisor: Prof. U Kang)

Nov. 2019 - Present

- o 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

 ${\bf Real\text{-}Time\ Ubiquitous\ Systems\ Laboratory},\ Seoul\ National\ University$ 

Jul. 2017 - Feb. 2018

Research Internship (Advisor: Prof. Chang-Gun Lee)

o Implemented simulation to study effects of AED delivery using unmaned vehicle transport technology on defibrillation in out-of-hospital cardiac arrest

## WORKING EXPERIENCES

Google Software Engineering Intern, Google Korea LLC., Desktop Search Team Automatic I2F and Nesting config generation for hOSRP to diOSRP conversion Jun. 2021 - Sep. 2021

Designed an internal development tool for efficient development in OSRP migration

#### 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

 $\textbf{Basic Computing: First Adventures in Computing}, \ \textit{Teaching Assistant}$ 

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

## Deep learning-based wrinkle detection, Morpheus3D

Fall. 2020

Built new models to segment wrinkle parts in 3D scanned face images by exploiting state-of-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 Frameworks C++, Python, Java, MATLAB, Scala, Solidity, R (Welcome to any languages)

PyTorch, Tensorflow, React, AngularJS, Django

OpenCL, OpenGL, Hadoop, MFC

#### **HONORS** and AWARDS

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 Silver medal (the 3rd place)

May. 2015

#### **EXTRA-CURRICULAR ACTIVITIES**

WD Partners, Consulting Firm providing indoor ventilation solution

Jun. 2021 - Now

Theoretically found conditions with the most optimal ventilation efficiency through

CFD (Computerized Fluid Dynamics) analysis for pollutants like (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 preparing problem-solving interview

Jun. 2021 - Now

Opened weekly practices and workshops to share and learn skills and strategies with each other

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
Served beer and snacks as a part-time job after school

Dec. 2019 - Mar. 2020

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 ${\bf Republic\ of\ Korea\ Army},\ Obligatory\ Military\ Service$ 

Feb. 2018 - Oct. 2019

Discharged on full-term military service

Occupational specialty: administration, communication equipment operation, chaplaincy

KASTTC, Table Tennis Club

Dec. 2016 - Dec. 2017

Conducted lessons to improve the skills of members, managed participating competitions, and supervised weekly training as a club's trainer