# SANGJUN SON

## lucetre

 $1,\,\mathrm{Gwanak}\text{-ro},\,\mathrm{Gwanak}\text{-gu},\,\mathrm{Seoul},\,\mathrm{Republic}$  of Korea, 08826

#### 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. 2013 - Feb. 2016

Mar. 2016 - Present

# **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)

• 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

Nov. 2019 - Feb. 2021

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

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

#### 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

## 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

May. 2015

Silver medal (the 3rd place)

#### **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 (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