

# DONGHYUN SOHN

+82) 10-9039-9740 ◇ bulede37@gmail.com

bulede37@gmail.com ◇ linkedin.com/in/bulelion37 ◇ https://bulelion37.github.io

## FIELD OF RESEARCH

---

- Systems for large-scale data analysis
- Data cleaning
- Large-scale data analysis
- Social data mining

## EDUCATION

---

### Sogang University

Seoul, Republic of Korea

B.S. in Computer Science and Engineering

Feb. 2016 - Aug. 2021

- Early Graduation, Summa Cum Laude
- Cumulative GPA : 3.79/4.3, Major GPA : 3.92/4.3, Rank : 4/39

## EXPERIENCE

---

### Undergraduate Research, Big Data Processing Lab (Prof. Sungwon Jung)

Seoul, Republic of Korea

Researcher

Aug. 2020 - Present

- Researched document clustering using graph autoencoder
- Researched disk-based buffer augmented clustering feature tree for big data processing
- Made the CF tree of BIRCH based on disk and added buffer to support huge volumes of data efficiently.

### KATUSA(Korean Augmentation To the United States Army)

Camp Casey, Republic of Korea

Military Police (Compulsory Military Service)

Mar. 2017 - Dec. 2018

## PUBLICATIONS

---

1. **Donghyun Sohn**, Sungwon Jung, "Disk-based BACF Tree for Clustering Massive Datasets," **Korea Software Congress 2021. (Encouragement Prize)**
2. **Donghyun Sohn**, Jinwon Jung, Hyungjoon Kwon, Donghyuk Jeong, Dayoung Yoon, Myungwan Koo, "A real-time monitoring system using OpenPose," **Korea Software Congress 2021. (Excellence Prize)**

## SELECTED PROJECTS

---

### Disk-based Buffer Augmented Clustering Feature Tree [link]

C++, JAVA, Python

Lab Project

Mar. 2021 - Oct. 2021

- Made the CF tree of BIRCH disk-based to solve the problem of BIRCH being affected by memory size
- Used K-Means clustering to get the final cluster
- Got better final cluster's purity and recall of BACF than BIRCH's CF tree

### Building Management System [link] Python, Django, Flutter, PostgreSQL, OpenCV, HTML, JavaScript, CSS

Team Leader

Mar. 2021 - Aug. 2021

- Bangladesh startup support project organized by the Korea Invention Promotion Association and Korea Economic TV, rewarded 2200\$ for good performance
- Developed surveillance camera that detects worker's posture by using OpenPose
- Designed database and developed interconnected Android application, website, and server

<b>Automation of Korean Port Open-Storage Yard</b> <a href="#">[link]</a>	JAVA, Android Studio, MySQL, Apache Tomcat
Team Leader	Mar. 2020 - Sep. 2020
<ul style="list-style-type: none"> <li>Designed database and constructed server</li> <li>Developed Android application</li> </ul>	
<b>Pintos Projects</b> <a href="#">[link]</a>	C, Ubuntu
Personal Project	Sep. 2020 - Dec. 2020
<ul style="list-style-type: none"> <li>Implemented user program, thread, virtual memory</li> </ul>	
<b>SIC/XE Machine</b> <a href="#">[link]</a>	C, Linux
Personal Project	Mar. 2020 - Jun. 2020
<ul style="list-style-type: none"> <li>Implemented shell, memory space, opcode table</li> <li>Implemented assemble, linking, loading</li> </ul>	
<b>Text Mining with MongoDB</b> <a href="#">[link]</a>	Python, MongoDB
Personal Project	May. 2020 - Jun. 2020
<ul style="list-style-type: none"> <li>Analyzed news articles and found out the words mainly used in news articles by using the FP-Growth algorithm</li> </ul>	
<b>Comparison of R Tree and KD Tree</b> <a href="#">[link]</a>	C
Personal Project	Nov. 2020 - Dec. 2020
<ul style="list-style-type: none"> <li>Constructed KD Tree, R Tree</li> <li>Sent Range Query, kNN Query to both trees and compare performances.</li> </ul>	

## AWARDS

<b>Excellence Prize</b> , Korea Software Congress 2021	Dec 2021
<b>Encouragement Prize</b> , Korea Software Congress 2021	Dec 2021

## SKILLS

<b>Programming</b>	C, C++, JAVA, Python, HTML, CSS, PostgreSQL, MySQL
<b>Frameworks</b>	Django
<b>Tools</b>	Git
<b>Languages</b>	English, Korean

## UNDERGRADUATE TEACHING EXPERIENCES

<b>Data Structure Mentor</b> , Sogang University	Mar. 2021 - Jun. 2021
<ul style="list-style-type: none"> <li>Helped students to learn Data Structure</li> </ul>	
<b>Basic Engineering Design Mentor</b> , Sogang University	Mar. 2020 - Jun. 2020
<ul style="list-style-type: none"> <li>Helped junior students who are major in Computer Science and Engineering to learn the C language</li> </ul>	
<b>International Student Mentor</b> , Sogang University	Mar. 2020 - Jun. 2020
<ul style="list-style-type: none"> <li>Helped international students who are major in Computer Science and Engineering</li> </ul>	
<b>Computational Thinking Mentor</b> , Sogang University	Mar. 2020 - Jun. 2020
<ul style="list-style-type: none"> <li>Helped students who are not major in Computer Science and Engineering to learn Python</li> </ul>	
<b>2019 SW Camp Teaching Assistant</b> , Sogang University	Jul. 2019 - Aug. 2019
<ul style="list-style-type: none"> <li>Helped Elementary School students to learn the Arduino</li> </ul>	

## **CERTIFICATION**

---

**ISTQB(KSTQB : Korean ver) - CTFL(Certified Tester Foundation Level)**

Mar. 20. 2018