

Junhyeong Jeon

Daejeon, South Korea | muchwater@kaist.ac.kr | 010-4902-2846 | github | linkedin

Education

- Korea Advanced Institute of Science and Technology (KAIST)**, Daejeon, South Korea March 2020 – Present
- **Degree:** B.S. in Computer Science (School of Computing)
 - **Double Major:** Electrical Engineering
 - **Minor:** Science and Technology Policy
 - **GPA:** 3.80 / 4.3 (Earned 197 Credits)
- Hong Kong University of Science and Technology (HKUST)**, Hong Kong Jun 2023 – Aug 2023
- International Summer Exchange Program

Research Experiences

- Efficient LLM Serving via Speculative Decoding in Distributed Systems** Jan 2026 – Present
Affiliation: INA Lab, KAIST (Prof. Dongsu Han)
Role: Undergraduate Individual Research
- Researching methods to improve memory efficiency and throughput of LLM serving in distributed system environments.
 - Designing an hybrid draft method selection strategy that adaptively chooses the optimal speculative decoding approach based on agentic workload characteristics.
 - Identifying and mitigating system-level bottlenecks that degrade serving performance under online inference conditions.
- mmWave-Based Weapon Detection System (Compressive Sensing)** Sep 2025 – Dec 2025
Affiliation: CyPhy Lab, KAIST (Prof. Jun Han)
Role: Undergraduate Research Intern
- Developing a weapon detection system using mmWave with metasurfaces.
 - Optimized Frequency Selective Surface (FSS) unit-cells to enhance sensing efficiency.
- Exploration of Emerging Technologies & International Security Issues** Sep 2024 – Oct 2025
Affiliation: FINST&P, KAIST (Commissioned by MOFA)
Role: Participating Researcher (2 consecutive annual projects)
- (2025) Analyzed AI, cybersecurity, and space security trends; compared tech-security policies of US, EU, and China; organized expert FGI and WESF roundtable proceedings.
 - (2024) Surveyed security implications of emerging technologies across AI, cybersecurity, quantum, space, and critical minerals.
- Effects of Medical School Quota Policy on STEM Human Resources** Jan 2024 – Jun 2024
Affiliation: KAIST URP Program
Role: First Author (Junhyeong Jeon, Jinwoo Park, Junho Kwon, Soyoung Kim)
- Conducted quantitative and qualitative analysis on the impact of policy changes on STEM talent supply.

Work Experience

- Batonus**, Daejeon, South Korea Dec 2022 – Feb 2023
- Role:** Project Manager & AI Developer
- Initiated and led the SafetyDet project, a real-time child safety incident detection system for playgrounds and educational environments.
 - Set up the AI experimentation pipeline and conducted initial research on Pose Estimation and Object Detection techniques for accident recognition.

Publications & Presentations

Performance Improvement of Scene Text Detection Using Randomized Preprocessing and Efficient Backbone Utilization	2022
<i>Junhyeong Jeon</i> , Seonghun Park, Seoyoung Park, Hojun Park, Wooseok Jeong, Okjoo Choi (KCC 2022)	
Effects of Medical School Quota Policy on STEM Human Resources	2025
<i>Junhyeong Jeon</i> National STS-STP Undergraduate Conference 2025 (Oral Presentation)	
Examining the Sewol Ferry Disaster from the Bottom Up	2022
<i>Junhyeong Jeon</i> , Yeonsu Park Disaster School, KAIST Graduate School of Science and Technology Policy (Presentation)	

Projects

Zero Factory: Integrated Zero-Waste Service Platform	2025
Role: Project Manager & Tech Lead	
Stack: Python (PyTorch, FastAPI), Kotlin, Docker, Kubernetes (EKS), GitHub Actions	
• Led a cross-functional team and defined the technical roadmap for a map-based zero-waste service platform. • Built an AI vision system using ResNet and YOLO to classify reusable and disposable containers. • Designed a scalable infrastructure with automated CI/CD pipelines using Docker Compose and GitHub Actions.	

Teaching Experience

CS101 Introduction to Programming (School of Computing, KAIST)	Sep 2021 – Present
Teaching Assistant (Fall 2021, Spring 2022, Fall 2022, Fall 2023, Spring 2024, Fall 2024, Spring 2026)	
SW Academy, KAIST	Mar 2025 – Present
Main Instructor; Developing a Generative AI Service Application (2026), Information Security for AI (2025)	
Center for Gifted Education, KAIST	Mar 2021 – Feb 2026
Lead Coding Mentor (FLOW Camp 2026; designed placement tests and developed course materials), Coding Mentor (FLOW Camp 2024, 2025), Mentor (Online Gifted Education 2021, Science Outreach 2021)	
KU Camp Middle School Mentoring (KU Networks)	Aug 2024
Mentor	

Extracurricular Activities & Leadership

Daejeon Youth Policy Network	Mar 2024 – Dec 2024
Role: Team Leader (Culture Team 3) Hosted by Daejeon Youth Tomorrow Center & Daejeon Metropolitan City.	
Music Crew PlanB (KAIST & CNU Joint Band Club)	Dec 2020 – Aug 2023
Role: Founder & Representative (2020.12–2022.07) Founded a joint university band club and led initial organization and performances.	
Sixline (Acoustic Band) & Eunmak (Indie Film Club)	Sep 2020 – Aug 2022
Active Member, KAIST Undergraduate Clubs	

Honors & Awards

KAIST Academic Excellence Scholarship	Aug 2021 – Aug 2025
Awarded for outstanding academic performance.	
Excellent Volunteer Designation & Bronze Badge	2025
Yuseong-gu Volunteer Center	
Best Mentor Award	2023, 2024
Daejeon Seo-gu Out-of-School Youth Support Center	

Skills

Programming: Python, C/C++, Verilog, SQL, Scala
Tools & Frameworks: vllm, PyTorch, Docker, Kubernetes (EKS), AWS, GitHub Actions
Languages: Korean (Native), English (Fluent), Chinese (Basic), Japanese (Basic)