

# Wonjun Park

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## EDUCATION

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### University of Texas at Arlington

Arlington, Texas, U.S.A.

Master of Science in Computer Science

Aug 2024 – Expected May 2026

- **Cumulative GPA:** 4.0 / 4.0 (*Phi Kappa Phi Honor Society*, 2025)
- **Scholarships:** Youngho Kim Scholarship (Jan 2025), Dean of Engineering Scholarship (Sep 2024)
- **Highlight Courses:** Bioinformatics, Data Mining, Machine Learning, Neural Networks, General Purpose GPU Programming, Data Analysis and Modeling Techniques (Probability and Statistics), Design and Analysis of Algorithms

### Konkuk University

Seoul, South Korea

Bachelor of Science in Computer Science and Engineering

Mar 2018 – Aug 2024

- **Cumulative GPA:** 3.67 / 4.5
- **Scholarships:** Merit-based Academic Scholarship (Mar 2022), SW Activities Scholarship (Dec/Jan 2019), Internalization Scholarship (Jul 2019)
- **Highlight Courses:** Natural Language Processing, Computer Vision, Signal Processing, Statistical AI, Data Science, Database, Operating Systems, Computer Security, Computer Networks, Philosophy of Life and Death, Introduction to Psychology

### Purdue University

West Lafayette, Indiana, U.S.A.

Visiting Scholar

Mar 2023 – Jun 2023

- **Audit Course:** CNIT 34400 Network Engineering Fundamentals
- Attended in a Robotics and Intelligent Systems Expo (RISE) conference

### Universidad Internacional Menéndez Pelayo

Santander, Cantabria, Spain

Summer Short-term Program

Jul 2019

## PUBLICATION

**A: Acknowledgement, C: Conference**

[C.3] Park, W., and Zhu, K.. An Incremental Framework for Sound Source Separation. *Under Review*.

[C.2] Park, W., et al. Towards Distance-aware Synthetic Audio Mixtures for Universal Sound. *ICASSP 2026*.

[C.1] Park, W., et al. [Deploying a Sustainable Deep Learning Pipeline for Poison Ivy Image Classification](#). In *2024 IEEE First International Conference on Artificial Intelligence for Medicine, Health and Care (AIMHC)*. pp. 181-184. IEEE.

[A.1] Dang, T., et al. EmotionCanines: A Dataset for Analysis of Arousal and Valence in Dog Vocalization. In *2025 ACM Multimedia*.

## PROJECT

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### Animal Language Processing and Understanding

Principal Investigator: Dr. Kenny Q. Zhu

Arlington Computational Linguistics Lab

Feb 2025 - Present

- Wrote 1 paper for submissions, and assisted 1 USDA grant proposal
- Curated a dataset for Dog Vocal Separation task in a *Barkopedia* challenge held at IJCAI 2025
- Interviewed 12 candidates for a REU program about Animal Language Processing
- Collected Coyotes vocal from Fort Worth Zoo and analyzed it with Sound Event Detection models

### Auditory EEG Decoding Challenge

Principal Investigator: Dr. Eun Yi Kim

Hosted at 2024 IEEE International Conference on Acoustic, Speech and Signal Processing (ICASSP)

Sep 2023 – Dec 2023

- Analyzed EEG-Audio pair data with EEGChannelNet and HuBERT encoders, training to find similar features between modals

### Korean Software Square – Spring 2023

Principal Investigator: Dr. Eric T. Matson

Funded by the Korean government (IITP, Ministry of Science and ICT)

Mar 2023 – Jun 2023

- Spearheaded an MLOps project among 15 undergraduates nationwide selected by a government program
- Wrote a research paper as 1<sup>st</sup> author, publishing to an IEEE conference

### EEmaGe: EEG-based Image Generation for Visual Reconstruction

[GitHub](#)

Capstone Project for Bachelor's Graduation

Sep 2023 – Jun 2024

- Suggested a framework for RE2I utilizing Self-Supervised Learning with 2 autoencoders and its downstream task
- Demonstrated that removing labels and shuffling dataset pairs rather improved encoder performance by 0.8%

### Do Brain Organoids Have Cognition?

3<sup>rd</sup> Idea Hackathon in Brain and Cognitive Science Community

Jun 2024

- Proposed an experiment idea to foster communication between multiple brain organoids via electrical signals, forming their own language as time goes on, inspired by *Sapiens*, Yuval N. Harari

- Evaluated cognition theories like Global Workspace Theory and Integrated Information Theory and debated with 6 distinct majors, leading a debate to the limitations of these theories to apply in the organoids

## EMPLOYMENT

**Teaching Assistant: CSE-3302/5307 Programming Languages**      **University of Texas at Arlington (Arlington, Texas, U.S.A.)**  
*Programming Language Concepts, Teaching*      Sep 2025 – Jan 2026

- Developing weekly assignments, leading 45-minute weekly tutorials, and grading pop quizzes

**Undergraduate Research Intern**      **Purdue University (West Lafayette, Indiana, U.S.A.)**  
*PyTorch, TensorFlow, Kubernetes, Docker, KubeFlow, Azure*      Mar 2023 – Jun 2023

- Secured independent ML environment for 2 teams on VMWare type 1 hypervisor mounted 3 GPUs and AKS deployed KubeFlow
- Engineered CI/CD/CT DL pipelines with 1,028 own collected plant image removed background with Segment Anything Model

**Sergeant**      **Republic of Korea Army (Daejeon, South Korea)**  
*Excel, Leadership, Communication, Teamwork, Discipline*      May 2020 – Nov 2021

- Optimized a 5% replacement cycle of 4,000+ military equipment items by devising an Excel-based inventory system in Division
- Led a squad of 6 soldiers working in a 24/7 operation room for over 6 months, ensuring the safety and security of the facility

**Full-Stack Developer**      **ViralPro (Seoul, South Korea)**  
*Beautiful Soup, Selenium, Cron, Shell Scripting, SQL, Git, Business Modeling*      Dec 2018 – Feb 2020

- Launched MVP with web crawler and cron, attaining ₩100M (\$70K) vouchers from the government startup fund

**Teaching Assistant: 1-1 C Programming, 1-2 Java Programming**      **Konkuk University (Seoul, South Korea)**  
*C, Java, Mentorship, Tutoring*      Mar 2019 – Jun 2019, Aug 2019 – Dec 2019

- Mentored 20 students on both online and 16-week lectures and provided interpersonal coding classes, all student passed

## SKILL

**Programming Languages** – Python, C, C++, Java, JavaScript, Shell Scripting

**Frameworks, Libraries, and Tools** – Transformers, PyTorch, TensorFlow, JAX, CUDA, Kubernetes, Docker, Vagrant, Tableau, VIM

**Knowledge** – Natural Language Processing, Computer Vision, Signal Processing, Object-Oriented Programming, Agile and Waterfall, Test-Driven Development, Business Modeling, Lean Startup, Minimum Viable Product

## HONOR & DISTINCTION

**Unicorn Award (3<sup>rd</sup>)** – Summer Hackathon, Google Developer Group Campus Korea      Jun 2022

**Idea Award** – LINC+ Idea Contest, Konkuk LINC+      Jun 2019

## PRESENTATION

**Barkopedia: A Canine Vocalization Understanding Challenge**, IJCAI 2025, Montreal, Canada - [HOMEPAGE](#)

**Key Metrics in Sound Source Separation**, Arlington Computational Linguistic Laboratory Seminar – [PDF](#), [KEYNOTE](#)

**EEG Signals in Computer Science Perspective**, Brain & Cognitive Science Community Seminar – [PDF](#), [KEYNOTE](#)

**EEG Emotion Recognition Via Ensemble Learning Representation**, course presentation at Signal Processing – [PDF](#), [KEYNOTE](#)

## CERTIFICATE

**Certificate of Competency** – Getting Started with Accelerated Computing CUDA C/C++, NVIDIA      Jan 2025

**Certificate of Completion** – Brain and Cognitive Science Community      Sep 2024

**Certificate of Merit** – Purdue University      Jun 2023

**Certificate of Open Badge** – Konkuk University      Mar 2023

**Certificate of Youth Entrepreneurship Academy Completion** – Learning Factory      Sep 2021

**Certificate of Attendance and Marks** – Universidad Internacional Menéndez Pelayo      Jul 2019

## EXTRACURRICULAR ACTIVITY

**[Brain and Cognitive Science Community](#) | Member**      Mar 2024 – Sep 2024

- Analyzed 6 subjects on each dataset for Alzheimer's and right-hand movement patterns as visualizing 3D fMRI data
- Presented how to analyze time series data like brain signals with deep learning, especially Transformers, to 6 different majors
- Volunteered at the 2024 KSCS Mind, Brain & Data conference
- Audited the Symposium on Neural and Cognitive Architecture and International Brain Initiative Daegu Conference

**[RIKU \(Running in Konkuk University\)](#) and [Running Earth With Us](#) | Crew Member**      Mar 2022 – Jun 2024

- Ran regular running, participating in marathon events like Gangdong Seonsa 5K in Seoul and The Challenge 5K at Purdue

**Book Salon | Lead**      Dec 2021 – Oct 2022

- Organized and led a book club with individuals from various fields, while reading books and sharing opinions

**Picture Hands-up (Photo Club) | Club President**

Mar 2018 – Dec 2019

- Served as club president from January 2019, organizing group trips and regular outings to locations such as Ttukseom and Namsan to take pictures and hosting events like Secret Santa and Produce-Pickhands (a photo contest)

**Student Council at Software in Konkuk University | Member of Planning & Accounting**

Mar 2018 – Dec 2019

- Privileged to dedicate organizing events and managing a budget, facilities, and receipts for other students
- Assisted in operating the university festival by managing crowd control and serving refreshments

**1318 Happy Zone Local Center For The Children | Volunteer**

Sep 2018 – Nov 2018

- Mentored a middle school student in Korean, Mathematics, and Korean History, developing tailored lesson plans, improving reading comprehension and problem-solving skills, and fostering engagement through interactive, interest-based learning as adapting teaching methods to maximize educational outcomes