Kyung Myung Ko [US Permanent Resident]

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EDUCATION

University of Washington

Sep 2025 - Jun 2027

Master of Science in Electrical and Computer Engineering

Purdue University

Expected May 2025

Bachelor of Science in Computer Science and Artificial Intelligence

 Computer Vision with Deep Learning, Natural Language Processing, Signals and Systems, Security Analytics, Intro to Robotics, Data Mining & Machine Learning, Statistical Methods

EXPERIENCE

Research Intern, National Institute of Astrophysics, Optics and Electronics, Mexico

Jun 2024 - Aug 2024

Advisor: Dr. Thamar Solorio, Dr. Manuel Montes-y-Gómez

- · Developed a multimodal text and speech interaction module for classification, utilized openSMILE and SONAR.
- Replicated and evaluated the baseline work on the multiligual & multimodal hate speech detection task.
- Attended NAACL 2024 conference, engaged in oral, poster, and workshop sessions.

Research Assistant, Purdue University, West Lafayette IN

May 2023 - Oct 2023

Advisor: Dr. James Davis

- · Addressed the gap in understanding factors that influence signing adoption to ensure reliability of software packages.
- Developed scripts to aggregate PGP signatures on Maven Central repository and analyzed their qualities (Code).
- Contributed to the experimental design section of paper and published to IEEE S&P'24.

Data Processing Manager, Republic of Korea Army, South Korea

Sep 2021 - Mar 2023

- Operated and ensured the security of the transmitted data from the Army Tactical Command Information System.
- Tracked IP addresses of operational machines and compiled weekly reports of their privacy status.
- Managed the networked surveillance cameras around the unit and ensured their reliable streaming 24/7.

Research Intern, Northwestern University, Remote

Jun 2021 - Aug 2021

Advisor: Dr. Marcelo Worsley

- · Addressed the challenge of learning experiences for youth with mobility disability by enabling game-based learning.
- Designed and collected EEG dataset, extracted features to train classification models via GRU, KNN, XGBoost (<u>Code</u>).
- Developed a pipeline for real-time EEG data to player movement in the video game Minecraft, submitted to EAAI-24.

Caterpillar Corporate Partner Researcher, The Data Mine at Purdue, West Lafayette IN

Aug 2020 - May 2021

Advisor: Sridhar Ramaswamy

- Addressed the missing data problem of the mining truck through time-series data imputation (Poster).
- Utilized a vanilla GAN model and applied adversarial training algorithm to perform regression on the multivariate time series data, evaluated the performance with L1 & L2 loss (<u>Code</u>).

PUBLICATION/PREPRINT

Signing in Four Public Software Package Registries: Quantity, Quality, and Influencing Factors
 Taylor R Schorlemmer, Kelechi G Kalu, Luke Chigges, Kyung Myung Ko, Eman Abdul-Muhd Abu Isghair, Saurabh Baghi,

Proceedings of the 45th IEEE Symposium on Security and Privacy (S&P) 2024.

* Increasing Accessibility for Game-based Learning Experiences: Developing Brain Computer Interface Controls for Minecraft Andy Ko, Vishesh Kumar, Marcelo Worsley

Previously submitted to EAAI-24

Santiago Torres-Arias, James C Davis

* Evaluating Video Frame Interpolation and Audio Guidance Models With Distanced Frame Inputs

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Course Project Report, 2024

* Multimodal Hate Speech Detection via Acoustic Textual Neural Transformer

Kyung Myung Ko, Manuel Montes-y-Gómez, Thamar Solorio

Internship Report, 2024

* Audio-Visual Agreement for Audio-Visual Question Answering

Kyung Myung Ko

Course Project Report, 2024

Teaching

Data Structures And Algorithms For DS/AI SP25, Purdue University

- Established grading rubric for homework assignments on Gradescope.
- Performed testing on the projects in Vocareum to ensure appropriateness.
- · Held weekly office hours and answered EdStem questions to assist students in the coursework.
- Participated in weekly instructor meetings to address students' concerns and proposed solutions to mitigate with the instructor team.

Problem Solving And Object-Oriented Programming SP25, SP24, FA23, Purdue University

- · Led laboratory sessions and assisted students to accomplish the weekly assignments.
- · Held weekly office hours to assist introductory student in CS/DS/AI majors in the curriculum.

Service

Purdue Korean Association Recruiting Manager 2023-2024, Purdue University

- Bridged the connection between Korean companies and the students at Purdue by managing the visitation from the corporations, publishing email announcements, and editing posts on the website.
- · Assisted planning and setting up cultural events and ceremonies for students at Purdue.

Hello World Hackathon Mentor 2020, Purdue University

• Assisted the participants in the annual freshmen 24-hour hackathon event by answering questions and providing suggestions to development of ideas, ranked as the #1 mentor to answer the most questions.

Volunteer Assistant Teacher 2015-2016, Korean Culture & Language School of Oklahoma

• Assisted in logistics and bridged communication between the students and the teachers in Korean language teaching and cultural activities.

HONORS/AWARDS & SKILLS

Honors

CS Department Outstanding Student in Al 2024, Purdue University

Dean's List 2019, 2020, 2021, 2023, 2024, Purdue University

Excellence in the Annual Headquarters Security Audit 2022, Republic of Korea Army

Academic Excellence in Telecommunications Military Training School 2021, Republic of Korea Army

Austin Coding Academy Scholarship 2018, Austin Coding Academy Asia Society of Oklahoma Scholarship 2016, Asia Society of Oklahoma

Excellence in Junior Leadership Award 2016, The National Association for Korean Schools

Skills

Python, Java, Bash, C, C#, JavaScript, HTML/CSS