

# Kyochul Jang

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GitHub: [github.com/OfficerChul](https://github.com/OfficerChul) | Portfolio: [kyochuljang.com](https://kyochuljang.com)

## EDUCATION

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### Purdue University

West Lafayette, IN

Bachelor of Science in Computer Science

Expected Graduation: December 2023

## RESEARCH EXPERIENCE

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### Undergraduate Researcher

08/2023-Present

Vertically Integrated Project – College of Engineering

West Lafayette, IN

- Developed predictive machine learning models at the Bechtel Innovation Design Center to identify potential hazards, contributing to proactive safety measures and risk prevention.

### Undergraduate Research Assistant / Undergraduate Researcher

10/2022-Present

SIMPLE Laboratory - Purdue University

West Lafayette, IN

- Analyzed over 100 models utilizing YoloV5 in the intersection of computer vision and civil engineering, focusing on Transfer Learning and Domain Adaptation. This extensive study led to the publication of a co-authored journal paper.
- Processed and optimized over 25,000 videos (more than 1.4TB), implementing features such as face blurring using OpenCV.

### Undergraduate Researcher

05/2022-08/2022

Seoul National University (SNU) - Human Brain

Seoul, KR

Function (HBF) Laboratory

- Conducted in-depth analysis and delivered presentations on the effectiveness of various Machine Learning models, such as DNN and RNN, in Deep Learning.
- Conducted Speech-Decoding experiments on individuals with epilepsy, analyzing neural data to identify key features for the SVM Machine Learning model in a four billion dollar government-led project called "Alchemist".

### **Undergraduate Data Science Researcher**

08/2021-05/2022

The Data Mine, Purdue University - UPS

West Lafayette, IN

- Collaborated with UPS on Cross Reference and used Python and PowerBI to analyze the dataset provided by UPS using internal and external resources to give UPS insight into what portfolio companies to invest.
- Developed a predictive model using a K-means algorithm in the Scikit-Learn framework with the data to assess the potential of portfolio companies for UPS to partner with.

## **WORK EXPERIENCE**

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### **Software Engineering Intern**

06/2023-08/2023

Samsung Electronics

Suwon, KR

- Developed an automated program utilizing a probabilistic methodology to identify program performance segments of mobile AP in Galaxy series products.
- Conducted in-depth analysis of current and voltage usage in application processes utilizing Geekbench5.

### **Undergraduate Teaching Assistant – CS 17700**

08/2022-Present

College of Science, Purdue University

West Lafayette, IN

- Created customized Python assignments for students based on their level of proficiency and course requirements, ensuring effective learning outcomes.
- Instructed course materials and provided guidance to students in lab sessions while also assisting the Graduate Teaching Assistant in supervising and grading student work.

### **Web Development Tutor**

05/2022-08/2022

Independent

Seoul, KR

- Provided personalized web development tutoring to two design students, guiding them through creating and deploying their websites from scratch.
- Designed a 12-week course about web development. | Course Website: <https://officerchul.github.io/webDev101/>

### **Student Office Staff**

08/2021-05/2022

Purdue University Residences

West Lafayette, IN

- Served as a front-line representative of University Residences within the First Street Towers residence hall.
- Learned how to treat customers in various situations and how the Residence system works at Purdue University.

## Moderation Intern

06/2020-07/2020

Bridging Group Korea

Seoul, KR

- Successfully managed a diverse group of 500 international buyers and sellers, utilizing fluency in Korean, English, and Chinese, while moderating SPP2020, a high-profile event sponsored by the Seoul Business Agency.
- Acquired valuable customer service experience and a comprehensive understanding of the Residence system at Purdue University through various situations.

## PUBLICATION

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- 1) Oh, D., Kang, K., Seo, S., Xiao, J., **Jang, K.**, Kim, K., Park, H., Won, J. (2023). Low-Cost Object Detection Models for Traffic Control Devices through Domain Adaption of Geographical Regions. *Remote Sensing*. <https://doi.org/10.3390/rs15102584>

## CONFERENCE PRESENTATION

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- 1) **Purdue Undergraduate Research Conference | 2023**  
**Jang, K.**, Oh, D., Kang, K. (2023). Domain Adaptation Using Pre-trained Object Detection Models for Traffic Control Devices in Other Geographical Regions. *Purdue Undergraduate Research Conference*
- 2) **The Data Mine Corporate Partners Symposium | 2022**  
Alhasan, Isslam., Ghaisas, Mihika., Iyer, Sankaran., **Jang, K.**, Kris, Leungwattanakij., Zheng, Annie. (2022). Prediction Model to Help UPS Identify Potential Companies that Yields Positive Results for the Company Using K-Means Algorithm. *The Data Mine*

## LEADERSHIP EXPERIENCE

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### Recruitment Liaison Team Leader

08/2021-08/2023

Purdue Korean Association (PKA)

West Lafayette, IN

- Led a team of 10 members, the largest in the association, and collaborated with Korean companies to recruit talented individuals from around the world.
- Secured club operation fees through successful donation requests from prominent companies such as Samsung Electronics, LG, and SK Innovation, resulting in \$7000 raised for the semester.

### Squad Leader

08/2018-03/2020

Republic of Korea Army

Seoul, KR

- Served as a squad leader of a radio operation squad in the military at Capital Defense Command
- Worked as a translator of Chinese, English, and Korean at Army Headquarters

## PROJECT EXPERIENCE

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### Purdue Korean Association Website Development

08/2023-Present

Typescript, React, Figma, Next.js, Nest.js

West Lafayette, IN

- Build a renewal Purdue Korean Association Official Website, independently creating a custom solution without relying on any Content Management System (CMS).
- Contribute to front-end and back-end development tasks while utilizing Figma for UI/UX design to enhance user experience.

### Neural Data Analyzation Program

08/2022

Python Dash

Seoul, KR

- Developed a user-friendly web application using Scipy for noise processing and Python Dash to assist neuroscientists in analyzing and plotting neural data without the need for the knowledge of coding.

### Personal Website

08/2022-Present

React.js, CSS, HTML

West Lafayette, IN

- Created and deployed my portfolio website from scratch using Firebase, React.js, CSS, and HTML, without relying on any pre-existing templates. | Website: [www.kyochuljang.com](http://www.kyochuljang.com)

### Online Networking Platform

11/2020-12/2020

Java, JUnit Test

West Lafayette, IN

- Developed a social networking application similar to LinkedIn, allowing job seekers to showcase their skills and interests to potential recruiters.
- Conducted comprehensive testing of all program functions developed by team members using JUnit, successfully identifying and resolving defects to ensure optimal program performance.

## AWARDS AND HONORS

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### Semester Honors

01/2021 ~ 05/2021

### Dean's List

08/2021 ~ Present

# PROFICIENCY IN SKILLS

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**Languages:** English (Full Professional Proficiency), Chinese (Full Professional Proficiency), Korean (Native)

**Programming Languages:** Python, Java, C, C++, R, JavaScript (React.js), LaTeX, CSS, HTML

**Tools:** GitHub, OBS, Visual Studio Code, Artificial Neural Network (ANN), TensorFlow, Premiere Pro

**Certification:** HSK (Level 6), Craftsman Information Processing