



## Constant Learning Developer TaeYoun (Jack) Kwon

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Portfolio	<a href="https://taeyoungwon.github.io/">https://taeyoungwon.github.io/</a>
Blog	<a href="https://kweont.tistory.com">https://kweont.tistory.com</a>

### KEY STRENGTH

- Participate in Several Computer Vision projects using Python, PyTorch, MariaDB, and PyQt5 for object tracking, data management, and build a GUI program.
- Develop several programs using concepts of Artificial Intelligence, Deep Learning, NLP, Computer vision
- Experience using various programming languages like Python, C++, SQL, and JavaScript
- Experience using libraries and frameworks like PyTorch, Spark, cv2, Pnadas, and Matplotlib.

### EDUCATION RECORD

Name	Duration	Major	Graduate
Seattle Pacific University	2020.09 ~ 22.06 2016.09 ~ 18.06	Computer Science, Bachelor of Science	Yes
Portland Christian High School	2013.09 ~ 16.06	-	Yes

### MILITARY RECORD

Type	MOS	Rank	Duration	Exemption
Army	Rifleman	Sergeant	2019.01 ~ 2020.08	-

### WORK EXPERIENCE

Name	Duration	Details
Astrion Corporation	2022.06 ~ 22.10	<ul style="list-style-type: none"><li>- Design and establish user-friendly websites by using HTML5, CSS, and JavaScript</li><li>- Train 10+ staff members in internal web functions, including steps to update/change independently.</li><li>- Set up the shared company server for coworkers to share the necessary files and documents through the server</li><li>- Build a Server backup program using Python to zip and save the company's weekly data.</li></ul>
Dandi Bioscience Corporation	2021.05 ~ 21.08	<ul style="list-style-type: none"><li>- Update and expand the company's main webpage by using PHP and Bootstrap.</li><li>- Visualize the company's biomedical data using Pandas and Matplotlib libraries in Python.</li><li>- Communicated with the upper department on an ongoing basis to provide updates and answer questions related to the website to move projects forward</li></ul>

## EXTRACURRICULAR ACTIVITY

Name	Duration	Details
Job Searching Club	2023.03 ~	<ul style="list-style-type: none"><li>- Preparing for the Coding Test and Interview</li><li>- Share useful Job Information</li></ul>
AI Study Club	2022.09 ~	<ul style="list-style-type: none"><li>- Read AI and ML Journals together to learn up-to-date AI technology.</li><li>- Operate one AI project per week to improve CNN, RNN, Computer Vision, Regression, Classification skillset,</li><li>- Participate in AI competitions from Kaggle every month.</li></ul>
Software Engineering Mentorship	2022.01 ~ 22.06	<ul style="list-style-type: none"><li>- Meet software engineers in BECU and Microsoft to operate code review and job mentorship to improve coding skills</li></ul>
SPU CS Club	2020.09 ~ 22.06	<ul style="list-style-type: none"><li>- Gather and solve coding test questions every day</li><li>- Learn and practice the most up-to-date programming languages that is used in the CS field</li><li>- Participate in Google Kickstart and Kaggle competitions together each month</li></ul>

## EXTRACURRICULAR EDUCATION

Name	Duration	Details
Microsoft AI School	2022.09 ~ 23.03	<ul style="list-style-type: none"><li>- Advanced Python skill set</li><li>- Improve using frameworks and libraries like Flask, Spark, PyTorch, and TensorFlow.</li><li>- Learned and operate projects related to CNN, RNN, ML, OI, NLP, and computer vision</li></ul>

## HONORS & AWARDS

Name	Date	Details
SPU Merit Scholarship	2016.09	-

## LICENSES & CERTIFICATIONS

Name	Date	Name of Organization
SQLD	2023.04	K-DATA
Microsoft DP900	2023.01	Microsoft
Microsoft AI900	2022.12	Microsoft

## SKILL HIGHLIGHTS

Category	Skill Name	Level	Detail
Programming Languages	C++	(●●●●)	<ul style="list-style-type: none"><li>- Confident in building Windows and Linux applications.</li></ul>
	Python	(●●●●)	<ul style="list-style-type: none"><li>- Confident in using various libraries and frameworks to create AI-related programs and visualize results.</li></ul>

	HTML5	(●●●)	- Confident in building webpages by using HTML5, CSS, JavaScript, and Bootstrap. - Confident in Optimizing the webpages for various devices.
	CSS	(●●●)	
	JavaScript	(●●●)	
	PHP	(●●○)	
	SQL	(●●●)	- Confident in managing data in the database server
Tools	Visual Studio & Code	(●●●)	- Confident in using VS tools to create programs
	GitHub	(●●●)	- Confident in using GitHub for version control - Confident in using GitHub for team works or cooperation
	Azure DevOps	(●●○)	- Experienced in using Azure DevOps to create and run virtual servers
	Docker	(●●○)	- Experienced in using Docker to create containers and use Kubernetes
Languages	Korean	(●●●)	- Native-level Korean speaker (Verbal and written)

## PROJECT RECORDS

### 1. Object Tracking for Unauthorized Aircraft (UA)

Duration	2023.01 ~ 23.03
Outline	Send warning E-mails and provide visualized data to the user if the UA object is detected.
N of Participants	6 people
Settings	<ul style="list-style-type: none"> <li>- Programming Languages: Python, SQL</li> <li>- Frameworks: PyTorch, YOLOv8, PyQt5, MariaDB</li> <li>- Development Tools: Anaconda, Visual Studio Code, Windows Server 2019 DSVM</li> <li>- Version Control: GitHub, Microsoft Teams, Discord</li> </ul>
My Role	<ul style="list-style-type: none"> <li>- Create custom image datasets by using CVAT Tool for image training.</li> <li>- Write the code to send object tracking data to MariaDB.</li> <li>- Build the program to get E-mail addresses from MariaDB and send alarming E-mails to customers</li> <li>- Run model testing and find the best model from YOLOv5 and YOLOv8.</li> <li>- Update the program with multi-process for the system's concurrency operation.</li> </ul>
Functions	<ul style="list-style-type: none"> <li>- Create YOLOv8 based model by image training with custom image datasets</li> <li>- Provide UA object tracking service with the model provided from YOLOv8</li> <li>- Send data to MariaDB and E-mail to the user if the UA target object is detected</li> <li>- Provide visualized information on UA data by using PowerBI</li> </ul>
Result	<p>[Result]</p> <ul style="list-style-type: none"> <li>- Build Object Tracking service perfectly by running model test, building GUI, and connecting to MariaDB and PowerBI</li> </ul> <p>[Learned]</p> <ul style="list-style-type: none"> <li>- Learned the most up-to-date framework and GUI-building skill</li> </ul>

	<ul style="list-style-type: none"> <li>- Advanced in using PyTorch to pre-process and create models for the particular image projects</li> <li>- Advanced in reading various open-source code</li> </ul>
Link	<a href="https://github.com/yeoiksu/MS-AI-PROJECT">https://github.com/yeoiksu/MS-AI-PROJECT</a>

## 2. Object Classification for Unauthorized Aircraft (UA)

Duration	2023.01 ~ 23.01
Outline	Send warning E-mails and the UA object's current location to the user if the UA object is detected
N of Participants	5 people
Settings	<ul style="list-style-type: none"> <li>- Programming Language: Python</li> <li>- Frameworks: PyTorch</li> <li>- Development Tools: Anaconda, Visual Studio Code, Windows Server 2019 DSVM</li> <li>- Version Control: GitHub, Microsoft Teams, Discord</li> </ul>
My Role	<ul style="list-style-type: none"> <li>- Create custom image datasets by using CVAT Tool for image training.</li> <li>- Create Image pre-processing code for model training</li> <li>- Build the program to get the detecting machine's IP and GPS location.</li> <li>- Run model testing and find the best model from Yolov5.</li> <li>- Manage team's Version Control</li> </ul>
Functions	<ul style="list-style-type: none"> <li>- Create yolov5 based model by image training with custom image datasets</li> <li>- Provide UA object classification service with the model provided from yolov5</li> <li>- Send a warning E-mail with the UA object's GPS location</li> </ul>
Result	<p>[Result]</p> <ul style="list-style-type: none"> <li>- Build Binary Classification to detect UA object</li> </ul> <p>[Learned]</p> <ul style="list-style-type: none"> <li>- Learned how to test to find and test the best image training model</li> <li>- Advanced image pre-processing method and skills related to PyTorch</li> <li>- Improve reading other developer's code from open source 향상</li> </ul>
Link	<a href="https://github.com/TaeYounKwon/Computer-Vision-Dev/tree/main/44.JupyterNotebook_Bird%20vs%20Drone">https://github.com/TaeYounKwon/Computer-Vision-Dev/tree/main/44.JupyterNotebook_Bird%20vs%20Drone</a>

## 3. Trainr.Space – Web Application

Duration	2021.11 ~ 22.05
Outline	Web Application for Trainers and Trainees
N of Participants	5 people
Tools	<ul style="list-style-type: none"> <li>- Programming Languages: ReactJS, JavaScript, GraphQL</li> <li>- Development Tools: Visual Studio Code</li> <li>- Version Control: GitHub, Discord</li> </ul>
My Role	<ul style="list-style-type: none"> <li>- Design the web application for both desktop and mobile devices.</li> <li>- Build the front-end part of the web application by using ReactJS, HTML, CSS, JavaScript, and Bootstrap.</li> </ul>

	<ul style="list-style-type: none"> <li>- Help to connect the front-end development to the AWS server and GraphQL.</li> <li>- Help to build several Back-end functions and fix errors.</li> </ul>
Functions	<ul style="list-style-type: none"> <li>- Create an E-mail verification system using AWS and GraphQL for new users to create an account.</li> <li>- Provide a main feed service for users to share their class information.</li> <li>- Provide messaging service for users to communicate personally.</li> </ul>
Result	<p>[Result]</p> <ul style="list-style-type: none"> <li>- Create optimized Web applications for trainers and trainees using AWS, ReactJS, and GraphQL.</li> </ul> <p>[Learned]</p> <ul style="list-style-type: none"> <li>- Learn the importance of a sprint plan</li> <li>- Advance knowledge related to AWS and GraphQL</li> <li>- Improve skillset of optimizing UI/UX development</li> </ul>
Link	<a href="https://github.com/TaeYounKwon/Frontend-Dev/tree/main/React.js_Trainr.Space">https://github.com/TaeYounKwon/Frontend-Dev/tree/main/React.js_Trainr.Space</a>

#### 4. University Curriculum Planner

Duration	2022.01 ~ 22.03
Outline	Provide university curriculum planning chart
N of Participants	2 people
Settings	<ul style="list-style-type: none"> <li>- Programming Language: Python</li> <li>- Development Tools: Visual Studio Code</li> <li>- Version Control: GitHub, Discord</li> </ul>
My Role	<ul style="list-style-type: none"> <li>- Write the code to read and write the .csv file from the user.</li> <li>- Build the unique sequence using user inputs with a topology sort algorithm.</li> <li>- Visualize the unique sequence by using the "Schemdraw" Python library.</li> <li>- Manage the program version control and fix errors.</li> </ul>
Functions	<ul style="list-style-type: none"> <li>- Read CSV files that are written with pre-requisites, starting quarter, and max credit taking</li> <li>- Create a university curriculum by using the topology sort algorithm</li> <li>- Visualize the Result by using the "Schemdraw" library</li> </ul>
Result	<p>[Result]</p> <ul style="list-style-type: none"> <li>- Build a program that creates a flow chart that shows how to graduate from university with various restrictions</li> </ul> <p>[Learned]</p> <ul style="list-style-type: none"> <li>- Advance algorithm knowledge</li> <li>- Learn various visualizing methods using Python libraries</li> </ul>
Link	<a href="https://github.com/TaeYounKwon/Algorithm-Dev/tree/main/Python_University%20Curriculum%20Planner">https://github.com/TaeYounKwon/Algorithm-Dev/tree/main/Python_University%20Curriculum%20Planner</a>