AI Developer & Engineer

TaeYoun (Jack) Kwon

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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	- Design and establish user-friendly websites by using HTML5, CSS, and JavaScript - Train 10+ staff members in internal web functions, including steps to update/change independently. - Set up the shared company server for coworkers to share the necessary files and documents through the server - Build a Server backup program using Python to zip and save the company's weekly data.
Dandi Bioscience Corporation	2021.05 ~ 21.08	- Update and expand the company's main webpage by using PHP and Bootstrap. - Visualize the company's biomedical data using Pandas and Matplotlib libraries in Python. - Communicated with the upper department on an ongoing basis to provide updates and answer questions related to the website to move projects forward

EXTRACURRICULAR ACTIVITY

Name	Duration	Details
Job Searching Club	2023.03 ~	- Preparing for the Coding Test and Interview - Share useful Job Information
AI Study Club	2022.09 ~	- Read AI and ML Journals together to learn up-to-date AI technology. - Operate one AI project per week to improve CNN, RNN, Computer Vision, Regression, Classification skillset, - Participate in AI competitions from Kaggle every month.
Software Engineering Mentorship	2022.01 ~ 22.06	- Meet software engineers in BECU and Microsoft to operate code review and job mentorship to improve coding skills
SPU CS Club	2020.09 ~ 22.06	- Gather and solve coding test questions every day - Learn and practice the most up-to-date programming languages that is used in the CS field - Participate in Google Kickstart and Kaggle competitions together each month

EXTRACURRICULAR EDUCATION

Name	Duration	Details
Microsoft AI School	2022.09 ~ 23.03	- Advanced Python skill set - Improve using frameworks and libraries like Flask, Spark, PyTorch, and TensorFlow. - Learned and operate projects related to CNN, RNN, ML, 이, NLP, and computer vision

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++	(●●●)	- Confident in building Windows and Linux applications.
	Python	(●●●)	- Confident in using various libraries and frameworks to create AI-related programs and visualize results.

	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	- Programming Languages: Python, SQL - Frameworks: PyTorch, YOLOv8, PyQt5 - Development Tools: Anaconda, Visual Studio Code, Windows Server 2019 DSVM, MariaDB - Version Control: GitHub, Microsoft Teams, Discord
My Role	- Create custom image datasets by using CVAT Tool for image training. - Write the code to send object tracking data to MariaDB. - Build the program to get E-mail addresses from MariaDB and send alarming E-mails to customers - Run model testing and find the best model from Yolov5 and Yolov8. - Update the program with multi-process for the system's concurrency operation.
Functions	- Create yolov8 based model by image training with custom image datasets - Provide UA object tracking service with the model provided from yolov8 - Send data to MariaDB and E-mail to the user if the UA target object is detected - Provide visualized information on UA data by using PowerBI
Result	[Result] - Build Object Tracking service perfectly by running model test, building GUI, and connecting to MariaDB and PowerBI [Learned]

	- Learned the most up-to-date framework and GUI-building skill - Advanced in using PyTorc to pre-process and create models for the particular image projects - Advanced in reading various open-source code
Link	https://github.com/yeoiksu/MS-AI-PROJECT

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	- Programming Language: Python - Frameworks: PyTorch - Development Tools: Anaconda, Visual Studio Code, Windows Server 2019 DSVM - Version Control: GitHub, Microsoft Teams, Discord
My Role	- Create custom image datasets by using CVAT Tool for image training. - Create Image pre-processing code for model training - Build the program to get the detecting machine's IP and GPS location. - Run model testing and find the best model from Yolov5. - Manage team's Version Control
Functions	- Create yolov5 based model by image training with custom image datasets - Provide UA object classification service with the model provided from yolov5 - Send a warning E-mail with the UA object's GPS location
Result	[Result] - Build Binary Classification to detect UA object [Learned] - Learned how to test to find and test the best image training model - Advanced image pre-processing method and skills related to PyTorch - Improve reading other developer's code from open source 향상
Link	https://github.com/TaeYounKwon/Computer-Vision-Dev/tree/main/44.JupyterNotebook_Bird%20vs%20Drone

3. Trainr.Space – Web Application

Duration	2021.11 ~ 22.05
Outline	Web Application for Trainers and Trainees
N of Participants	5 people
Tools	- Programming Languages: HTML/CSS/JavaScript, GraphQL - Frameworks: AWS - Development Tools: Visual Studio Code, Trello - Version Control: GitHub, Discord
My Role	- Design the web application for both desktop and mobile devices.

	- Build the front-end part of the web application by using React.JS, HTML, CSS, JavaScript, and Bootstrap. - Help to connect the front-end development to the AWS server and GraphQL. - Help to build several Back-end functions and fix errors.
Functions	- Create anE-mail verification system using AWS and GraphQL for new users to create an account. - Provide a main feed service for users to share their class information. - Provide messaging service for users to communicate personally.
Result	[Result] - Create optimized Web applications for trainers and trainees using AWS, ReactJS, and graphQL. [Learned] - Learn the importance of a sprint plan - Advance knowledge related to AWS and GraphQL - Improve skillset of optimizing UI/UX development
Link	https://github.com/TaeYounKwon/Frontend-Dev/tree/main/React.js_Trainr.Space

4. University Curriculum Planner

Duration	2022.01 ~ 22.03
Outline	Provide university curriculum planning chart
N of Participants	2 people
Settings	- Programming Language: Python - Development Tools: Visual Studio Code - Version Control: GitHub, Discord
My Role	- Write the code to read and write the .csv file from the user. - Build the unique sequence using user inputs with a topology sort algorithm. - Visualize the unique sequence by using the "Schemdraw" Python library. - Manage the program version control and fix errors.
Functions	- Read CSV files that are written with pre-requisites, starting quarter, and max credit taking - Create a university curriculum by using the topology sort algorithm - Visualize the Result by using the "Schemdraw" library
Result	[Result] - Build a program that creates a flow chart that shows how to graduate from university with various restrictions [Learned] - Advance algorithm knowledge - Learn various visualizing methods using Python libraries
Link	https://github.com/TaeYounKwon/Algorithm-Dev/tree/main/Python_University%20Curriculum%20Planner