DAYOUNG YUN

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EDUCATION

B.Sc. Information Systems, B.Sc. Computer Science - *Hanyang University, Seoul*   *Mar 2019 - Current*
GPA: 4.42 / 4.5

EXPERIENCE

Software Development Engineer Internship   *Mar 2021 - Aug 2021*
Neurocle, Seoul

- Developed a desktop application in C++, Qt, and OpenCV that can process images and videos to perform deep learning vision tasks (Classification, Object Detection, Segmentation, OCR, Anomaly Detection).

- Allowed data storage for images, videos, and inference results and provided statistics on product defect rates which can be used at factory production lines.

- Cross compiled source code to support multiple platforms including Windows and Nvidia Jetson boards, and debugged existing software bugs using GDB.

- Code Repository

Programming Mentoring Volunteer   *Mar 2020 - Dec 2020*
Hanyang University Programming Student Organization, Forif (Github, SNS)

- Volunteered as mentor, teaching algorithms to non-computer science major Hanyang university students. Covered topics such as sorting algorithms, BFS/DFS, Prims' / Kruskal's algorithm, Dijkstra's algorithm, etc. Also volunteered as mentor for Python programming, teaching fundamental programming concepts and GUI development in PyQt.

- Participated in Forif held hackathons as mentor, implementing algorithms based on research papers(notably Irving's Algorithm[1]) and developing GUI applications in Python.

- Mentoring Websites: Algorithm Mentoring Site, Python Mentoring Site

- Forif Hackathon Projects: Irving's Algorithm Matching System(C++), Trip Advisor Recommendation System(Python)

PROJECTS

3rd Year Bachelor Project in Computer Vision & AI   *Sep 2021 - Dec 2021*
Supervision : Dr. Youngjoon Won, Hanyang University
Mobile application that supports medication intake of the elderly using AI

- Designed the database schema and developed the backend server in Django to manage user data such through a RESTful API. Also engineered image transmission between the client and server so users can receive intake guidance just by taking pictures of pills.

- Programmed a proxy server for SKT's AI speaker Nugu so users can query data through voice commands.

- Trained an object detection[2] model in Tensorflow to identify pills and deployed the model in the backend server.

- Code, Project Website

TOD Footage AI Security Project *Jul 2021 - Aug 2021*
Neurocle Internship
Object Detection on TOD Surveillance Footage

- Performed object detection on TOD(thermal observation device) footage using OpenCV and deep learning to identify cars, people and animals.

- Applied background subtraction method to reduce noise in footage and allow the object detection algorithm to focus on objects that are moving.

Web Development Project *Aug 2020 - Sep 2020*
Personal Team Project
Chrome Browser Extension for Hanyang University Students

- Developed a REST API in Python Django and deployed the server to an AWS EC2 cloud instance. Collaborated with front-end student developers to complete the project and deploy the application on the chrome web store.

- Code Repository, Chrome Web Store Link

AWARD

SKT AI Curriculum IC-PBL *3rd Place* *Jan 2021*
SK Telecom, Hanyang University

Won third place in the 2021 SKT AI Curriculum-Hanyang University IC-PBL Competition held jointly by Hanyang University and SK Telecom, with third year bachelor project mentioned above.

CERTIFICATIONS

Machine Learning with Tensorflow from Udacity *Oct 2021*
Credentials

- Neural Networks, Supervised & Unsupervised Learing Methods (Naive Bayes, SVMs, PCA etc.)

SKILLS

Languages:	Korean(Native), English(IELTS band C1)
Programming:	C, C++, Python, Java, Javascript
Software & Tools:	**Backend:** Django, NodeJS, SQLite, AWS **Computer Vision & Machine Learning:** Tensorflow, Pytorch, OpenCV, NumPy, Pandas **Others:** Qt
Courses:	Calculus, Statistics, Data Structures, Algorithms, Database Systems Computer Networks, Operating Systems, Object Oriented Systems Design Computer Architecture, System Programming, Digital Logic Design Artificial Intelligence, Computer Security, Micro-Processors

REFERENCES

1. R.W. Irving, "An Efficient Algorithm for the 'Stable Roommates' Problem ", in Journal of Algorithms, 1984

2. M. Tan, R. Pang, Q. V. Le, "EfficientDet: Scalable and Efficient Object Detection", in the 2020 IEEE Conference on Computer Vision and Pattern Recognition, 2020