

ALEXEY LI

ML Engineer

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📁 portfolio

ACADEMIC EXPERIENCE

Pusan National University Busan, South Korea
Student Researcher - Machine Learning 09/2023 - 09/2024

- **Data Engineering:** Build large, custom datasets by implementing fetcher and preprocessing units to periodically retrieve data from varying sources using Python frameworks Pandas, NumPy, OpenCV.
- **Neural Network Modelling:** Developed, implemented, and optimized a Convolutional Neural Network (CNN) architecture for image data prediction using TensorFlow and Keras.

Pusan National University Busan, South Korea
Student Researcher - Data Science 09/2022 - 09/2024

- **Data Analysis:** data preparation with Pandas, NumPy and OpenCV, data visualization using Matplotlib, revealing correlations and dependencies within the data, and generating output predictions.
- **Prediction Modeling:** Building prediction models using Scikit-learn, Keras, and TensorFlow. Calculated and displayed model accuracy, precision, and confusion matrix results with proper consequences.

PROJECTS

Tailoring Music for Every Generation

TensorFlow Keras OpenCV SpotifyAPI Flask

Built **CNN** age recognition model **VGG19** with **6.32 MAE** for every age, connected Spotify recommendation system to listen demos

Human Detection with Area Attendance

OpenCV PIL Ultralytics Tkinter

YOLOv10 model and **DeepSort** algorithm to detect presence in video using polygons for entry and exit areas, enabling calculations of attendance and interest in public places. A **Tkinter**-based **GUI** allows drawing and adjustment of these polygons.

FlappyBird AI Bot

PyGame Neat Pickle

FlappyBird using **NEAT** (NeuroEvolution with Augmented Topologies) framework with integrated **Genetic Algorithm**, tuning the model and population genomes as soon it riches the game score **500**

EDUCATION

Pusan National University

Bachelor Degree in Computer Science and Engineering
09/2020 - 09/2024

SKILLS

Languages

Python, C++, Java, MySQL

Data Processing

Pandas, NumPy, OpenCV, PIL, re, Matplotlib, Seaborn

Model Development

Scikit-Learn, TensorFlow, Keras, PyTorch

Tools

Git, Docker, Linux

Additional Frameworks

GamePy, Flask, Tkinter

LANGUAGES

Korean - Intermediate(TOPIK4)

English - Advanced

Russian - Native

HOBBIES

Gym, Drawing, Hiking, Social Events

PREFERENCES

Computer Vision, AI research, Machine Learning, Data Science