#### **SUHWAN TCHA**

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Location: Bundang-gu, Seongnam-si, Gyeonggi-do, South Korea

# **Objective**

Aspiring machine learning engineer with a solid academic background and practical experience in machine learning, data analysis, and model development. Passionate about advancing AI technologies and eager to contribute to cutting-edge research projects through a summer internship at Boeing.

#### **Education**

**Sogang University** — Bachelor's Degree Candidate in Computer Science (Transferred in 2024, Expected graduation Aug. 2026)
Seoul, South Korea

- Relevant coursework: Introduction to Deep Learning, Basic Machine Learning,
   Systems Programming, Big Data Studies, Big Data Computing, Econometrics, Big Data and Business Model
- Member and mentor at Parrot Data Science Club (Parrot 데이터사이언스 학회), guiding junior members in machine learning projects and data analysis

**Hankuk University of Foreign Studies (HUFS)** — Major in Information and Communication Engineering (2020 – 2023)

 Relevant coursework: Relevant coursework: Linear Algebra, Algorithms, Discrete Mathematics, Probability and Statistics, Probability Distributions, Open Source and Software Practice

#### **Projects**

YouTube View Count Prediction

- Developed a Random Forest regression model to predict YouTube video view counts using data collected via the YouTube Data API.
- Performed feature engineering and data preprocessing on video metadata such as subscriber count, video length, channel category, and title length.

#### **Seoul Real Estate Price Prediction**

- Built a predictive model for property prices using publicly available real transaction data from Seoul's real estate market, sourced from the Korean Public Data Portal.
- Conducted comprehensive data cleaning, feature selection, and model evaluation to improve prediction accuracy.

# **Object Detection using SSD Model**

- Implemented an object detection system using Single Shot MultiBox Detector (SSD) to identify and classify objects in video frames.
- Improved detection accuracy and speed through model tuning and dataset augmentation.

# Dog and Cat Image Classification with EfficientNet

- Applied transfer learning with EfficientNet architecture to classify images of dogs and cats.
- Applied CutMix data augmentation technique to improve model robustness and accuracy.
- Achieved high classification accuracy by fine-tuning pretrained models.

## **Concurrent Stock Server Project**

• Built a concurrent stock trading server in C, implementing event-driven and thread-based models for efficient multi-client handling.

### **Database System Implementation**

 Designed a MySQL database from an E-R diagram, normalized to BCNF, and developed a C/C++ application using ODBC and MySQL C API. Implemented queries for sales and inventory analysis with realistic sample data.

# **Work Experience**

## Teaching Assistant - English & Math

Megastudy Russel Academy, Bundang-gu, Seongnam-si Yesum Academy, Gangnam-gu, Seoul

February 2024 - Present

- Assisted instructors with classroom management and lesson preparation for English and math classes.
- Supported students by providing explanations and answering questions during and after lessons.

### **Satellite Operation Squad Leader (Military Service)**

Republic of Korea Army, South Korea January 2022 – July 2023

- Led a squad responsible for operating and maintaining satellite communication equipment.
- Managed team coordination, training, and technical troubleshooting under highpressure situations.

#### **Skills**

- Programming: Python, PyTorch, TensorFlow, Scikit-learn, C/C++
- Machine Learning: Model Development & Evaluation, Supervised/Unsupervised Learning, Transformer-based Architectures (e.g., ViT, BERT), CNNs for Image Tasks, Time Series Forecasting, Generative Models (LLMs, VLMs)
- Data Analysis: Feature Engineering, Data Preprocessing, Visualization (Pandas, Matplotlib, Seaborn)
- Tools: Git, Jupyter Notebook, Visual Studio Code, MySQL, Notion, Linux, Google Colab
- Soft Skills: Problem Solving, Critical Thinking, Team Collaboration, Communication