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Jongwon Lee

Data Scientist

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SKILLS

- **Data Science:** Python, ML/DL - TensorFlow, Decision Tree, Random Forest, KNN, Lasso, Ridge, SVM, Regression Tree, XGBoost, Catboost, LGBM, SHAP, SMOTE, NLP - NLTK, Sentiment and Stance Detection, **Computer Vision** - Stable Diffusion, OpenCV, CNN
- **Data Visualization** - D3, Plotly, Seaborn, Paraview, Tableau, Google Chart, **Network Science** - Gephi, NetworkX, Neo4j, Cytoscape
- **Web/App/Server Dev:** Full Stack, Ruby on Rails, JS, Redis, Node, React, Java, Swift, AWS, Heroku, Search Engine, SQL, Postgres
- **Game Dev:** Unity, C# | **Others:** Git, R, LaTeX, Arduino, EV3, MIS, English, Korean, Chinese

WORK EXPERIENCE

Lead Software Engineer | Sungkyunkwan University | University Bus Tracking App | Seoul, Korea NOV 2017 — MAR 2019

- Conducted market research and developed a campus bus tracking app which resulted in 60%+ student population downloads.
- Managed project budget and resources. **AWS, Ruby on Rails, Java, Swift**

Data Scientist Intern | Smilegate | Game Platform Business | Pangyo, Korea JUN 2017 — AUG 2017

- Conducted NLP analysis on social media data to promote the Gaming Platform called Stove.
- Continued research involving a collection of social media data, keyword extraction, and web visualization won an AWS award.

Lead Software Engineer | Likelion | Course Evaluation and Search | Seoul, Korea OCT 2016 — MAR 2017

- Performed market research, planning, back-end development, server and database management using **Ruby on Rails** and **AWS**.

Military Police Investigator Sergeant | KATUSA - Yongsan US Army Garrison | Seoul, Korea MAY 2014 — FEB 2016

- Criminal Investigation Command - Simultaneous interpretation during field investigation and translation of legal documents.
- Directorate of Emergency Services - Interviewed and screened visitors accessing the military post and escort visitors.

PROJECTS AND RESEARCH

Property Sales Analysis and Prediction AUG 2022 — DEC 2022

- ML-based residential property prices prediction investigating housing properties. Leveraged Google Places, Melissa, Niche.com, Stats Indiana Data. Best model: XGBoost, MAPE 11.53% - **Linear Regression, SVM, XGBoost, Catboost, LGBM, SHAP**

Social Media Community Identification and Analysis AUG 2022 — DEC 2022

- Leveraged data from Twitter and explored community detection libraries and tools such as **Gephi, NetworkX, Neo4j, Cytoscape**.

Study Buddy Robot - Human Robot Interaction AUG 2022 — DEC 2022

- Led designing, building, and researching an **Arduino**-based interactive study buddy robot implementing Pomodoro technique.

3D Customer Segmentation Visualization with Paraview AUG 2021 — DEC 2021

- Performed feature exploration with 3D visualization using Kaggle customer segmentation data.

Evaluating Textual Features and Oversampling for Automatic Stance Detection AUG 2021 — DEC 2021

- Performed Natural Language Processing analysis on Twitter to research stance and sentiment. - **NLTK/SVM/SMOTE**

Systems Analysis and Design for CHRISTEL HOUSE INTERNATIONAL JAN 2022 — MAY 2022

- Proposed Data Collection Plan, KPI Management, Cost Benefit Analysis, and Implementation Plan for the client.

Oliver Winery Information Systems Research AUG 2021 — DEC 2021

- Identified issues and conducted Management Information Systems (MIS) approach to optimize operations for the client.

EDUCATION

M.S. in Data Science, Indiana University, Bloomington, IN 3.94 GPA DEC 2022

B.A. in Economics, Minor in Informatics, Indiana University, Bloomington, IN MAY 2020

B.A. in Global Economics, Sungkyunkwan University, Seoul, Korea / Full Scholarship by Samsung Electronics Co. Ltd. MAY 2020

AWARDS

Omnisian.com | AWS Power User Best 3 | Amazon Web Service Korea AUG 2017

Indie-Film Genie - Audience Prediction | Grand Prize | Sungkyunkwan University DEC 2016

Nabla Puzzle Game with Unity | Smilegate Game Jam Best 3 | Smilegate OCT 2016

Tost.com - English Academy Search Web Service | Likelion Hackathon 5th Place | Likelion SEP 2016

Analysis on the Effect of Legal Cap on Phone Subsidies | Grand Prize | Sungkyunkwan University AUG 2016

Forest Fire Early Detection and Suppression Tower with EV3 | Grand Prize, Patent | Sungkyunkwan University AUG 2016