Jongwon Lee

Data Scientist

(812) 272-3128
Bloomington, IN
lee.jongwon.dev@gmail.com

Blog: Jongwon.net
github.com/jongwoniee
linkedin.com/in/jongwonjohnlee

Skills

- **Data Science:** Python, **ML/DL** - TensorFlow, SQL, Decision Tree, Random Forest, SVM, Regression Tree, XGBoost, Catboost, LGBM, SHAP, SMOTE | **NLP** - NLTK, Sentiment/Stance Detection, Transformer, GPT | **Computer Vision** - GAN, Diffusion, OpenCV, CNN
  Data Visualization - D3, Plotly, Seaborn, Paraview, Tableau, Google Chart | **Network Science** - Gephi, NetworkX, Neo4j, Cytoscape
- **Software Engineering:** Full Stack, Ruby on Rails, Redis, Node, React, Swift, AWS, Heroku, Search Engine, Postgres, Unity, C#
- **Others:** Excel, Git, R, LaTex, Arduino, EV3, MIS, UX/UI Research, English, Korean, Chinese

Work Experience

Data Scientist Volunteer | Revolutionizing Policy Analysis with GPT | PolicyEngine | *United States*　　APR 2023 — Current
- Investigate novel uses of AI to make public policy more approachable to the public and policymakers.
- Conduct data science research using stacks such as GPT to improve public policy.

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.

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**.

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