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Jongwon Lee

Data Scientist

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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** - Stable 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 | PolicyEngine | United States** APR 2023 — Current
- Investigate novel uses of AI such as GPT to make public policy more approachable.
- 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