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# Jongwon Lee

Data Scientist/Analyst & Backend Developer [github.com/jongwonlee](https://github.com/jongwonlee) [linkedin.com/in/jongwonjohnlee](https://linkedin.com/in/jongwonjohnlee)

Blog: [Jongwon.net](https://jongwon.net)

[github.com/jongwonlee](https://github.com/jongwonlee)

## SKILLS

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

## 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.

### Overview of Human Robot Engagement - Bartender Robots AUG 2022 — DEC 2022

- Explored the definitions and research methods of engagement in HRI research by comparing three bartender robots.

### 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.

### Jongwon.net - Tech Blog and Resume JAN 2017 — Current

- Ruby on Rails**-based website posting Tutorials, Projects, Research, and Resume developed from scratch. - **AWS, Redis**

## 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 from this experience 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, and database management using **Ruby on Rails**.

## 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

**Undergraduate Full Scholarship | Samsung Electronics, Co. Ltd** MAR 2013