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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, Tensorflow, Logistic Regression, Naive Bayes, Decision Tree, Random Forest, KNN, Linear Regression, Lasso, Ridge, SVM, Regression Tree, XGBoost, Catboost, LGBM, SHAP, SMOTE, NLTK, Sentiment and Stance Detection, R, SQL | **Data Visualization:** D3, Python (Seaborn, Plotly), 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, Search Engine, Postgres | **Game Dev:** Unity, C# | **Others:** LaTeX, Arduino, EV3, MIS, English, Korean, Chinese

## PROJECTS AND RESEARCH

- Indiana 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 Problem 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

- SKKOOLBUS - University Shuttle Bus Tracking Application Development and Team Leader** NOV 2017 — MAR 2019  
*Sungkyunkwan University* Seoul, Korea  
• Performed Market Research and coordinated with the university for budget and resources. 6k+ downloads out of 10k population  
**AWS, Ruby on Rails, Java, Swift**
- Internship / Game Platform Business** JUN 2017 — AUG 2017  
*Smilegate* Pangyo, Korea  
• Performed NLP analysis on scraped data from Twitter, YouTube, and Google to promote the Gaming Platform called Stove.
- Back-end Developer and Team Leader / Course Evaluation and Search Service** OCT 2016 — MAR 2017  
*Likelion* Seoul, Korea  
• Performed market research, planning, back-end development, and database management using **Ruby on Rails**.

## EDUCATION

- Master of Science in Data Science, Indiana University Bloomington / Graduated This Term** **3.94 GPA** DEC 2022
- Bachelor of Arts in Economics, Minor in Informatics, Indiana University Bloomington** MAY 2020
- Bachelor of Arts in Global Economics, Sungkyunkwan University / Full Scholarship by Samsung Electronics Co. Ltd.** MAY 2020

## AWARDS AND RECOGNITION

- Omnisian.com / AWS Power User Best 3 / Amazon Web Service Korea - Team Leader** AUG 2017  
• Collected Twitter data, extracted keywords, and generated reports on the web. **AWS, KoNLPy/NLTK, Python, Ruby on Rails**
- Indie-Film Genie - Audience Prediction / Grand Prize / Sungkyunkwan University - Team Leader** DEC 2016
- Nabla Puzzle Game with Unity / Smilegate Game Jam Best 3 / Smilegate** OCT 2016
- Tost - English Academy Search Web Service / Likelion Hackathon 5th Place / Likelion - Team Leader** SEP 2016
- Analysis on the Effect of Legal Cap on Phone Subsidies / Grand Prize / Sungkyunkwan University - Team Leader** AUG 2016
- Forest Fire Early Detection and Suppression Tower with EV3 / Grand Prize, Patent / Sungkyunkwan University** AUG 2016