

In Sung Jang

hanlbomi@gmail.com, 312-709-6783, Chicago, [LinkedIn](#), [Portfolio](#)

Professional Experience

University of Chicago | Data Scientist, Researcher

2020 - Present

- **Big Data Analysis and Software Development**

- Created end-to-end pipelines (Python and SQL) within a cloud computing environment, automatically processing over 1TB of unstructured dataset, enabling real-time data analysis and enhancing data integrity
- Employed machine learning algorithms (e.g., KNN and Decision Tree) to classify a vast source catalog ($N > 1$ million), achieving a 95% accuracy rate
- Led data analysis teams within the US and Germany driving improvements to flux measuring algorithms through non-linear predictive modeling, resulting in a 40% reduction in errors.

- **Quantitative Research and Engineering**

- Securing funding of over \$300k through NASA grant acquisition as a program lead
- Collaborated with international teams, overseeing pull requests and conducting thorough code reviews
- Independent research to develop data processing algorithms in astronomy; published over 5 papers

Leibniz Institute for Astrophysics (Germany) | Research Scientist

2016 - 2020

- **High-Performance Computing (HPC) and Time Series Data Analysis :**

- Utilized supercomputers for statistical modeling of unstructured data, reducing computation times by 90%
- Developed algorithms for the time-series analysis of variable stars, enabling the identification of transient phenomena
- Created a real-time dashboard visualizing key performance indicators using SQL and Google Data Studio

Skills and Qualifications

- **Artificial Intelligence (AI) & Deep Learning (DL) & Machine Learning (ML)**

- Certificates : (1) Deep Learning Specialization (Univ. of North Texas), (2) Python for Data Science, AI & Development (IBM), (3) SQL Basics for Data Science Specialization (Univ. of California), (4) Introduction to Deep Learning & Neural Networks with Keras (IBM), and (5) Developing AI Applications with Python and Flask (IBM)

- **Statistics:** Probability, Distributions, ML methods, Hypothesis testing, A/B testing, and predictive modeling

- **Programming languages:** Python (Pandas, Numpy, Matplotlib, Scikit-learn, Keras), SQL, R, Matlab, IDL, Bash, LaTeX, Vim

- **Software/Others:** Tableau, Linux/Terminal environment, Git

Education

Seoul National University, Ph.D in Physics

2009 - 2016

Inha University, BSc in Mechanical Engineering

2005 - 2009

Projects and Honors

Business Intelligence via AI/DL/ML

- (AI) Analyzed Amazon customer reviews using LLM (OpenAI), providing insights into customer sentiment and preferences
- (DL) Built a traffic sign classification model with CNNs using Keras, achieving a 93% accuracy
- (ML) Developed Chicago home price prediction models with Zillow data, using polynomial features and Linear Regression
- (ML) Optimized bank marketing strategies through K-Nearest Neighbor classifiers, resulting in enhanced efficiency
- (ML) Leveraged Decision Tree algorithms to forecast hotel booking demands; achieved a 92% accuracy

Data-Driven Research Publications ([Google Scholar Profile](#))

- 11 first-author journal articles with +300 citations in quantitative data analysis, ranking in the top 3% of the most cited work