Jangwon Seo

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Education

The University of British Columbia — Vancouver, BC

3rd Year, Bachelor of Science in Statistics — *Expected Graduation: 2027*

- **Relevant Coursework:** Data Science, Machine Learning, Probability, Statistical Inference, Regression Analysis, A/B Testing, Databases and Algorithms

Experience

Freelance Web Developer — May 2025 – Current

Smartmove Electrical & Automation, SP Development — *Remote*

- Designed and optimized end-to-end data pipelines, integrating public APIs for automated data ingestion, transformation, and validation.
- Built ETL workflows with Python, Pandas, and NumPy to deliver accurate, up-to-date datasets for geospatial and tabular visualization.
- Developed client-facing tools, enabling users to select regions on interactive maps and view API-powered data in geospatial and tabular visualizations, alongside CSV export features for decision-making.

Facility Manager — Aug. 2022 – May. 2024

Air Force Academy — *Cheongju, South Korea*

- Led and mentored a team of 8 soldiers while overseeing operational infrastructure.
- Automated task management with Python, including scheduling system optimizing shift allocations, reducing manual workload and documenting processes for team use.
- Applied constraint validation for fair and transparent scheduling, ensuring operational reliability.

Projects

Stock Dividend Trend Analysis and Predictive Modeling

- Designed and implemented Python data pipelines to preprocess large sequential datasets and train deep learning models (LSTM architecture) for predictive time-series analysis, applying model optimization and evaluation metrics.
- Implemented an LSTM model in TensorFlow/Keras to predict dividends, achieving 83.42% accuracy.
- Optimized performance with the Adam optimizer and applied scikit-learn evaluation metrics, reducing MSE and improving accuracy by 99% vs. SGD baseline.
- Developed a Tableau dashboard to visualize historical and LSTM-predicted ETF dividends with dynamic ticker filtering and KPIs.

GAN for Composite Generation with User judgment/preferences

- Applied GANs to generate facial composites; optimized model parameters in PyTorch for improved feature representation and realism.
- Utilized PyTorch/NumPy for model integration and Matplotlib for post-analysis visualization.
- Designed a latent-space optimization guided by user ratings to iteratively improve similarity of output.

PC Gamer Newsletter Subscription Prediction

- Collaborated with a team to preprocess player age & playtime data from a Minecraft server; built a KNN classifier in R, tuning neighbors via cross-validation.
- Evaluated accuracy/precision/recall on a test set and delivered stakeholder insights with visualizations of playtime patterns.

Kaggle Competitions

- Housing Price Prediction (Regression Models): Compared linear regression, decision trees, and random forest; implemented random forest to predict housing prices based on multiple features.
- LLM Response Classification (NLP): Developed TF-IDF + logistic regression and LLM-assisted classification pipelines; fine-tuned embeddings and evaluated performance using cross-validation.

Technical Skills

Languages: Python, R, SQL, C++, Java, JavaScript, HTML/CSS
Data & ML: PyTorch, Scikit-learn, Pandas, NumPy, TensorFlow, Matplotlib, Plotly, Tableau, PowerBI
Web & Tools: Django, MySQL, Git, Azure, Heroku