

Hyejin Won

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EDUCATION

Korea University, Seoul, Korea
B.S. in Computer Science and Engineering

Class of 2021
Overall GPA 4.0/4.5

Coursework: Deep Learning, Machine Learning, Introduction to Convex Optimization, Signals and Systems, Data Communications, Wireless Communications, Computer Networks, Probability and Random Processes, Discrete Mathematics, Data Structures, Algorithms, Operating Systems, Digital Logic Design, Computer Architecture, Databases

Awards: Capstone Competition – **Korea University (3rd Place Winner)**: Project Theme: "[Stock Trader Using DQN \(Deep Q-Network\)](#)"

WORK EXPERIENCES

Data Scientist - Publishing Platform, Krafton PUBG¹, Seoul, Korea July 2021 - Present

- **Developed a retention simulator** for PUBG: NEW STATE based on the Leslie matrix to predict Monthly Active Users (MAU) by modeling inflow and retention. Deployed the simulator as a [web application](#), allowing marketing team members to set goals and budgets for user acquisition (UA) campaigns. The tool provided a strategic foundation for campaign planning, leading to better decision-making in terms of user engagement and retention strategies.
- **Created a sales prediction model using Prophet** to forecast sales in the Russian market, addressing challenges posed by the Russian-Ukraine war and app store payment restrictions. The model evaluated the necessity of integrating with the third-party redeem service Xsolla, ultimately identifying Russia as a high-potential market (ranked within the top 5 sales regions). Based on these insights, the team decided to implement Xsolla, allowing for more effective payment solutions and sustaining revenue despite external constraints.
- **Built a churn prediction model using XGBoost**, significantly improving model accuracy from 78% to 87% through feature set refinement. The model's outputs were integrated into Braze, a marketing tool, to target churn-prone users with personalized retention strategies. Managed the entire machine learning lifecycle using MLflow, tracking experiments and ensuring model reproducibility. The improved accuracy and marketing alignment led to more effective user retention efforts, boosting campaign success.
- **Designed and implemented an ETL module using Python and DBT (Data Build Tool) principles** to streamline data transformation processes and improve pipeline efficiency. This module enhanced the efficiency and consistency of data workflows, improving overall data management across the platform.

Data Scientist - Commercial Strategy, Market Kurly², Seoul, Korea Jan 2019 - Feb 2020

- **Developed data-driven category management strategies** by analyzing sales efficiency using R and Python, improving the performance of the seafood category, which led to a 28% sales increase compared to other fresh categories. By identifying underperforming areas, the strategies enhanced both product assortment and category profitability.
- **Created a weekly trend report** using Python, Elasticsearch, and data from internal and external sources (e.g., Naver Shopping API) to identify emerging product trends. By introducing trend-driven items at the right time, this initiative helped increase sales by more than 2 times for relevant categories, optimizing product exposure and enhancing overall sales performance.

RESEARCH EXPERIENCES

Intern - ETRI (Electronics and Telecommunications Research Institute)³, Daejeon, Korea Dec 2017 – Feb 2018

- Utilized Google ImageNet data to classify pose categories, contributing to the definition and refinement of pose classifications.
- Worked with CCTV data for vehicle detection, responsible for marking bounding boxes around cars as part of the data labeling process.

¹ A game company best known for developing the global hit battle royale game, PUBG (PlayerUnknown's Battlegrounds).

² An e-commerce platform specializing in premium grocery delivery with a focus on quality and next-day service.

³ A government-funded research organization focused on advancing electronics, telecommunications, and information technology.