# Sojin Kim

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### **Education**

Ph.D. in Statistics Mar 2022 - Present

Ewha Womans University, Seoul, South Korea (Advisor: Jongwoo Song)

- Scholarship: Received scholarship for 1 semester (Spring 2022)
- Expected graduation in Feb 2025

#### **Master of Science in Statistics**

Mar 2020 - Feb 2022

Ewha Womans University, Seoul, South Korea (Advisor: Jongwoo Song)

### **Bachelor of Business Administration, Double Major in Statistics**

Mar 2014 - Aug2018

Ewha Womans University, Seoul, South Korea

### **Research Experience**

### **Data Mining Research Lab in Ewha**

Sep 2020 - Present

Graduate Research Assistant

Advisor: Jongwoo Song

- Developed an algorithm for Cost-Sensitive Learning for imbalanced data classification
- Developed a classification model for tabular data
- Applicated machine learning methods and Monte Carlo methods in option price prediction
- Applicated RNN for movie rate prediction using text data
- Applicated Neural Network (TGNet) for spatio-temporal data
- Participated in developing a semiparametric regression model for a survival analysis

# Institute for Software Research | Carnegie Mellon University, Pittsburgh, U.S. Aug 2022 - Feb 2023 Visiting Student

- Coursework: Introduction to Deep Learning, Large Scale Multimedia Analysis, Machine Learning and Game Theory, Natural Language Processing
- Developed a motion transfer algorithm using 3d mesh (Simplpix, Simplify-X)
- Developed an algorithm for de-blurring stereo images (DAVANet, DeblurNet)

### Division of Media | Ewha Womans University, Seoul, South Korea

Apr 2023 - Feb 2024

Research Assistant

- Character classification in children's animation using object detection (Yolov8, Faster R-CNN)
- Object detection in Korean dramas (Yolov8)

### Work Experience

### Lotte Mart | Seoul, South Korea

Aug 2018 - Feb 2020

Associate, Big Data team

• Analyzed sales and customer data for marketing

### **Publications**

**Sojin Kim** and Jongwoo Song. (In preparation). TabClassNet: A New Classification Method for Tabular Data Using Convolutional Neural Network

**Sojin Kim** and Jongwoo Song. (accepted). Analysis of Imbalanced Data using Cost-Sensitive Learning. Communications in Statistics - Theory and Methods.

**Sojin Kim**, Jimin Kim and Jongwoo Song. (2024). Option Pricing and Profitability: A Comprehensive Examination of Machine Learning, Black-Scholes, and Monte Carlo Method. Communications for Statistical Applications and Methods.

Seongjoo Song, Sulah Kwon, Siyoung Lee, **Sojin Kim** and Jongwoo Song. (submitted). Semiparametric regression model for survival data. Computational Statistics & Data Analysis.

**Sojin Kim** and Jongwoo Song. (2022). Semantic Analysis via Application of Deep Learning using Naver Movie Review Data. The Korean journal of applied statistics.

## **Additional Information**

- Certificates: Big-Data Analysis Engineer, ADsP, Computer Specialist in Spreadsheet & Database Level-1
- Languages: Korean, English (TOEIC 945), Japanese (JLPT N3)