

YE JIN CHOI

Columbus, OH ◇ choi.1577@osu.edu ◇ (505) 210 - 5375 ◇ [linkedin.com/in/yjchoi95](https://www.linkedin.com/in/yjchoi95)

Summary

I am passionate about doing in-depth data science research by bringing up my statistical background to collaborative projects. I enjoy modeling what's happening in the world and providing useful insights to positively impact people's lives.

Education

- **Ohio State University**, PhD Statistics, Aug 2020 - May 2025, GPA: 3.87
Advisor: Dr. Sebastian Kurtek
I am studying cell-to-cell interactions in histopathology images, focusing on their shapes and spatial correlations within the image domain. In particular, I am developing a framework that reveals their community structure and interconnectivity, and provides a local statistical summary of cell shapes.
Research interests: Statistical Shape Analysis, Spatial Statistics, Functional Data Analysis, Medical Imaging.
- **University of New Mexico**, MS Statistics, Aug 2018 - Aug 2020, GPA: 4.00, Passed PhD Quals
- **Ewha Womans University**, BS Statistics, Mar 2014 - Aug 2018, GPA: 3.83, Minor: Computer Science, Magna Cum Laude

Work Experience

- **Nationwide Insurance**, Research Intern, Aug 2023 - May 2024
Participating in a Personal Lines (PL) auto severity loss forecasting project and building a pipeline that performs automatic variable selection and fits the optimal ARIMA model using repeated holdout validation.
- **Wells Fargo**, Quantitative Analytics Intern, June 2023 - Aug 2023
Applied an unsupervised model to credit card transaction data to help reduce the false positive rate of current practices. Additionally, developed a composite model that leverages multiple machine learning algorithms for fraudulent transaction detection in Amex transaction data.
Skills: XGBoost, Long Short-Term Memory (LSTM), Empirical Cumulative-Distribution-Based Outlier Detection (ECOD)
- **Ohio State University**, Statistical Consultant, Jan 2023 - May 2023
Provided statistical consulting services to 5 clients in various disciplines, working towards their PhD dissertations. Participated in diverse projects, including linear regression, ANOVA, and survey data analysis.
- **Los Alamos National Laboratory**, Research Intern, May 2020 - Aug 2020
Developed a parallel-computing-based workflow for real-time analysis of experimental diffraction data.
Skills: Feedforward Neural Network (FNN), Convolutional Neural Network (CNN)
- **University of New Mexico**, Graduate Teaching Assistant, Aug 2018 - May 2020
Held full responsibility for teaching a section of the course, Introduction to Statistics, to 50 students, which included lecturing, grading, proctoring exams, and conducting office hours.

Skills

Languages: Python, R, MATLAB. Familiar with C++, and SQL

Packages: Pytorch, Tensorflow, PySpark

Others: Amazon Web Service(AWS), Git

Relevant Courses: Advanced Statistical Inference, Theory of Linear Models, Machine Learning, Data Mining, Theory of Probability, Theory of Stochastic Processes, Computational Statistics, Bayesian Analysis and Decision Theory, Causal Inference, Regression/ANOVA

Publications

1. Du, R., Choi, Y. J., Lee, J. H., Ounpraseuth, S., & Hu, Z. (2022). A weight Jackknife approach utilizing linear model based-estimators for clustered data. *Communications in Statistics-Simulation and Computation*.
2. Choi, Y.J., Bharath, K., & Kurtek, S. (2024). Integrating Elastic Shape Analysis and Topological Data Analysis for Classification of Complex Biological Data. - to appear in *Springer Book on Big Data Analysis, Biostatistics, and Bioinformatics*.
3. Choi, Y.J., Bharath, K., & Kurtek, S. (2023+). Spatially Correlated Elastic Shape Analysis with Application to Segmented Nuclei shapes. - in progress

Honors and Awards

1. University Fellowship, Ohio State University, Aug 2020 - Aug 2021
2. Graduate Student Fellowship, Los Alamos National Laboratory, May 2020 - Aug 2020
3. Achieved the highest score in Statistical Inference written qualifying exam, University of New Mexico, Aug 2019
4. Exchange Student Scholarship, Mirae Asset Park Hyeon Joo Foundation (Finance company in South Korea)
5. Undergraduate Academic Scholarship (Dean's list), Ewha Womans University, Mar 2015 - Dec 2016