JIWON JUNG

(she/her/hers)
+1(765) 337-6003 ◇ MATH 507, 150 N University St, West Lafayette, IN 47907
Email: jung320@purdue.edu ◇ Webpage: jiwon-jung.github.io

RESEARCH INTERESTS

Data-driven methods in quantitative finance, insurance, and industry: high-frequency data, lead-lag trading strategy and health transition modeling

EDUCATION

Ph.D. in Statistics, Purdue University 2021 - 2024
— Thesis: Dynamics of Modern Financial Markets: Data-Driven Approaches
— (Co-)Advisor: Prof. Kiseop Lee and Prof. Mengyi Xu

M.S. in Statistics, Seoul National University 2017 - 2019
— Thesis: Statistically Principled Crowdsourcing Method for Sports Highlight Selection
— Advisor: Prof. Joong-ho Won

B.S. in Statistics and **B.A. in Economics,** Seoul National University 2013 - 2017

PROFESSIONAL EXPERIENCE

Purdue University Spring 2025 - Present
Visiting Assistant Professor — Main & Indianapolis Campuses

VivityAI 2022 - 2024
Data Analyst — Seoul, Korea (remote)

Asan Medical Center 2019 - 2020
Research Assistant — Seoul, Korea

LG CNS Winter 2018
Smart Factory Intern — Seoul, Korea

AWARDS & HONORS

Academic Honors

I.W. Burr Award for excellence in dissertation research and results, Purdue University 2025
Outstanding Teaching Award for Teaching Assistant, Purdue University 2024
Recognition Award for Efficiency Improvements, Purdue University 2024
4th place, Graduate Student Presentation Award, Korean Statistical Society 2022
Graduate Student Instructor scholarship, Seoul National University 2018
Academic Scholarship for Excellent Students 2013-2014, 2018

PUBLICATIONS

1. **Jung, J.** and Lee, K. (2024). Attention-Based Reading, Highlighting, and Forecasting of the Limit Order Book. *Quantitative Finance (Under Revision)*. Preprint available at arXiv:2409.02277.

2. **Jung, J.**, Lee, K., and Xu, M. (2024). Modeling Multi-State Health Transitions with Self-Exciting Processes. *North American Actuarial Journal (Under Revision)*. Preprint available at SSRN:4679916.

3. **Jung, J.**, Leung, T., and Lee, K. (2024). Threshold Overnight Comovement Analysis of Intraday and Overnight Returns. *Investment Analysts Journal (Accepted)*. Preprint available at SSRN:4946188.

4. Ho, D. J., Chui, M. H., Vanderbilt, C. M., **Jung, J.**, Robson, M. E., Park, C. S., and Fuchs, T. J. (2023). Deep Interactive Learning-based ovarian cancer segmentation of H&E-stained whole slide images to study morphological patterns of BRCA mutation. *Journal of Pathology Informatics* 14, 100160.

5. **Jung, J.**, Ha, S., Son, W., Lee, J., and Won, J. H. (2022). SportLight: statistically principled crowdsourcing method for sports highlight selection. *Journal of the Korean Statistical Society*, 51 (1), 127-148

6. Shin, S. J., You, S. C., Jeon, H., **Jung, J.** W., An, M. H., Park, R. W., and Roh, J. (2021). Style transfer strategy for developing a generalizable deep learning application in digital pathology. *Computer Methods and Programs in Biomedicine*, 198, 105815.

7. Kim, S. W., Roh, J., **Jung, J.**, Pak, H. K., Lee, A. N., Park, Y. S., and Park, C. S. (2020). Immune checkpoint molecule V-set Ig domain-containing 4 (VSIG4) expression is associated with poor prognosis in advanced gastric cancer patients. *The Journal of Immunology*, 204, 243.4-243.4

8. Roh, J., **Jung, J.**, Lee, Y., Kim, S. W., Pak, H. K., Lee, A., and Park, C. S. (2020). Risk Stratification Using multivariable fractional polynomials in diffuse large B-cell lymphoma. *Frontiers in oncology*, 10, 329.

CONFERENCE PRESENTATIONS

1. **Jung, J.**, Lee, K. (2024). Attention-Based Reading, Highlighting, and Forecasting of the Limit Order Book. *Invited talk at Joint Statistical Meetings 2024*, Portland, OR, U.S.

2. **Jung, J.**, Lee, K., and Xu, M. (2024). Modeling Multi-state Health Transitions with a Self Exciting Process. *Invited talk at American Mathematical Society (AMS) Sectional Meeting*, UMW, Milwaukee, WI, U.S.

3. **Jung, J.**, Lee, K., and Xu, M. (2023). Modeling Multi-state Health Transitions with Hawkes Processes. *Invited talk at INFORMS 2023*, Phoenix, AZ, U.S.

4. **Jung, J.**, Lee, K., and Xu, M. (2023). Modeling Multi-state Health Transitions with Hawkes Processes. *CEPAR International Conference*, UNSW, Sydney, Australia

5. **Jung, J.** and Lee, K. (2023). Attention-Based Reading, Highlighting, and Forecasting of the Limit Order Book. *Invited talk at SIAM Financial Mathematics and Enginering 2023*, DoubleTree by Hilton Philadelphia Center City, Philadelphia, PA, U.S.

6. **Jung, J.**, Leung, T., and Lee, K. (2023). A Lead-lag Analysis of Intraday and Overnight Returns. *Invited talk at American Mathematical Society (AMS) Sectional Meeting*, Georgia Institute of Technology, Atlanta, GA, U.S.

7. **Jung, J.**, Lee, K., and Xu, M. (2022). Modeling Functional Disability with Hawkes Process. *Actuarial Research Conference*, Urbana, IL.

8. **Jung, J.**, Roh, J., and Park, C. S. (2021). Abstract PO-079: Fused LASSO application for gastric cancer image segmentation. Clinical Cancer Research, 27, PO-079. *American Association of Cancer Research*, virtual.

TEACHING & ADVISING

Instructor

Statistics Dept., Purdue University
— STAT 301: Elementary Statistical Methods — Spring 2023 - Present

Teaching Assistant

Statistics Dept., Purdue University
— STAT 303: Probability & Statistics for Business — Fall 2021 - Spring 2022
— STAT 511: Statistical Methods — Spring 2021
— STAT 512: Applied Regression Analysis — Spring 2021

College of Liberal Studies Dept., Seoul National University
—Selected Topics Seminar 2: Information Theory — Fall 2018
—Selected Topics Seminar 1: Knowledge — Spring 2017

Statistics Dept., Seoul National University
— Statistics — Fall 2017
— Science Camp for High school Students in College of Natural Science — Summer 2017
— Big Data Special Course using R — Jan. 2016

LEADERSHIP, SERVICE, AND PROFESSIONAL DEVELOPMENT

Mentoring & Service

Mentored Purdue Undergraduate Research Conference (Mentee: Yang Lyu) — Spring 2025
Served as a judge evaluating undergraduate research presentations — Spring 2025

Session Organizer

Co-organized an invited session "Data-Driven Methods in Financial Markets" at JSM 2024

Travel Grants

George Casella Travel Award & ASA Travel Fund for JSM 2024 — August 2024
CEPAR 2023 — July 2023
Society for Industrial and Applied Mathematics (SIAM) — June 2023
Graduate Women in Science Program, Purdue University — Fall 2022
Emily and Paul Kidwell Graduate Student Excellent Award, Purdue University — Spring 2022

TECHNICAL SKILLS & LANGUAGES

Programming languages: `Python`, `R`, `MATLAB` (proficient); `Julia`, `C/C++`, `JAVA` (intermediate)
Statistical analysis tools: `Excel`, `SPSS` (proficient); `SAS` (intermediate)
Languages: English (fluent); Korean (native)