

# Jinmyeong Choi

jinmyeongchoi@snu.ac.kr | jinmyeongchoi.github.io | +1 412-478-0120 | +82 10-7607-7366

## Summary

Master's student in Data Science at Seoul National University researching time series forecasting, representation learning, and time series foundation models. My research spans robust multivariate forecasting under asynchrony and missingness, analysis of statistical properties encoded in foundation model representations, and representation based process control. I am interested in developing interpretable and reliable AI systems that support scientific understanding and decision making.

## Education

Seoul National University, Seoul, Republic of Korea

Sep. 2024 – Expected Feb. 2027

Master of Data Science

Seoul National University, Seoul, Republic of Korea

Mar. 2018 – Aug. 2024

Bachelor of Arts in Economics; Minor in Data Science for Humanities

## Research Interests

• Time Series Forecasting • Representation Learning and Interpretability • Time Series Foundation Models

## Publications

- [1] **Choi, J.**, Shook, B., and Dubrawski, A. “*Non-Stationarity in the Embedding Space of Time Series Foundation Models.*” *1st ICLR Workshop on Time Series in the Age of Large Models*, 2026.
  - Investigated how distributional shifts and temporal dependence are preserved or suppressed in the embedding spaces of time series foundation models.
  - Analyzed learned representations to reveal how statistical properties of time series are encoded, entangled, or discarded.
- [2] **Choi, J.**, Kim, T., and Dubrawski, A. “*Towards Universal Representation-Based Process Control.*” *60th Asilomar Conference on Signals, Systems, and Computers*, 2026.
  - Proposed a representation based process control framework that tests whether a system remains consistent with an empirical reference regime using foundation model embeddings.
  - Developed a calibrated consistency testing pipeline that accommodates stable stationary and cyclostationary regimes beyond fixed parametric tests.
- [3] Jang, J., Park, H., **Choi, J.**, and Kim, T. “*Towards Robust Real-World Multivariate Time Series Forecasting: A Unified Framework for Dependency, Asynchrony, and Missingness.*” *The Fourteenth International Conference on Learning Representations (ICLR)*, 2026.
  - Introduced ChannelTokenFormer, which models cross channel dependencies, asynchronous sampling, and missing intervals without interpolation.
  - Contributed to architecture design and implementation, ablation studies, and evaluation on benchmark and industrial datasets.

## Research Experience

---

**Remote Research Collaborator**, Robotics Institute, Carnegie Mellon University *Feb. 2026 – Present*

- Continue collaboration with Prof. Artur Dubrawski on representation learning and monitoring methods for time series foundation models.

**Research Intern**, Auton Lab, Carnegie Mellon University *Aug. 2025 – Feb. 2026*

- Led an independent project on the internal representations of large scale time series foundation models under the supervision of Prof. Artur Dubrawski.
- Conducted controlled experiments on nonstationarity in embedding space and developed representation based methods for time series monitoring and process control.

**Visiting Scholar**, Carnegie Mellon University *Aug. 2025 – Feb. 2026*

- Completed graduate coursework in Introduction to Deep Learning, Natural Language Processing, Large Scale Media Analysis, and Studio Project.

**Research Assistant to Prof. Jeong Min Lee**, Seoul National University *Jan. 2024 – Feb. 2024*

- Conducted data preprocessing and analysis in Python for an evaluation of the “Ansim Income” policy.
- Collaborated with a Seoul Welfare Foundation researcher to analyze the policy’s effects on welfare outcomes.

**Research Intern**, LAAL Lab, Seoul National University *Aug. 2023 – Aug. 2024*

- Built a financial time series dataset for stock price forecasting, compared MLP based forecasting models, and presented the findings.

## Teaching and Leadership

---

**Python Teaching Assistant**, Seoul National University *Mar. 2026 – Present*

- Lead hands on laboratory sessions and guide students through practical Python programming exercises.

**Python Tutor**, Seoul National University *Mar. 2023 – Dec. 2024*

- Tutored students in fundamental Python programming concepts and syntax.

**DTM Supporters**, Seoul National University *Sep. 2021 – Dec. 2021*

- Assisted international students with administrative tasks and cultural adaptation.

**President**, 7th L&K Sports Business Forum *Mar. 2022 – Aug. 2022*

**Seminar Team Leader and 1st Block Leader**, 32nd SNU Model United Nations *Mar. 2019 – Dec. 2019*

## Academic Service

---

**Reviewer**, 2nd ICML Workshop on Foundation Models for Structured Data (FMSD) *2026*

**Invited Reviewer**, NeurIPS Workshop on Foundation Models for Temporal Systems:  
From Forecasting to World Modeling *2026*

## Skills and Languages

---

**Programming and ML:** Python, PyTorch, NumPy, pandas, scikit-learn, Git, C/C++

**Languages:** English – High Proficiency (TEPS 465; TOEFL 100; CEFR C1), Mandarin – Intermediate

## Military Service

---

**Sergeant**, Republic of Korea Army; Honorably Discharged *Jan. 2020 – Jul. 2021*

- Served as a squad leader and completed Airborne/Paratrooper training, demonstrating leadership, adaptability, and teamwork under pressure.