

Gio (Jiwoong) Choi

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Education

M.A. in Computational Social Science, The University of Chicago Expected Jun 2026
B.E. in Software Engineering & B.A. in Economics, Kyung Hee University Feb 2024
Coursework: Deep Learning, Machine Learning, Econometrics, Causal Inference, Linear Algebra, Multivariable Calculus, Probability Theory, Applied Statistics, High-Performance Computing, Human-Computer Interaction
Teaching Assistant (Grader): ECON-23050 Artificial Intelligence, Innovation (Prof. [Ufuk Akcigit](#) & [James Evans](#))

Skills

Languages: Python, C/C++ (OOP, multi-threading), R, SQL
Technology: PyTorch, TensorFlow, Keras, Linux, Slurm, Docker, Git, QGIS

Working Projects - advised by (Prof. [James Evans](#))

- **LLM Multi-Agent Simulation** — Conducting a multi-agent simulation using Microsoft AutoGen & LLMs to replicate the scholars and predict future scholarly collaborations and research topics based on historical publication data
- **Automated Hypotheses Generation** — Identifying the factors that make research ideas impactful by analyzing publication data & metadata, and automating the hypotheses generation using a multi-armed bandit algorithm

Publications

[ASEAN Gender Outlook 2024](#) **United Nations General Assembly, New York 2024**
T. Chang, **J. Choi**, S. Duerto-Valero, W. Hong, S. Kaul, E. Lee, and C. Tinonin (Statistics)

- Led research on the status of SDG - Education & Industry, Innovation and Infrastructure in the ASEAN region
- Conducted linear regression analysis, processed micro-survey data, and visualized geospatial data for insights

[Korea Discount and Corporate Governance](#) **Morgan Stanley Capital International (MSCI) 2024**
S. Kim, K. Kim, **J. Choi**

- Developed a system to automatically collect and analyze the number and proportion of controlling shareholders' shares for all listed companies in the Korean stock exchange markets, categorizing ownership types
- Demonstrated that Korean companies deviating from the one-share-one-vote (OSOV) principle exhibited weaker financial performance, as measured by return-on-equity (ROE) and price-to-book ratio (PBR)

[Outdoor visual SLAM and Path Planning for Mobile-Robot](#) **IEEE - IRC 2022**
S Heo, J Mun, **J Choi**, J Park, ET Matson

- Developed a perception system for autonomous vehicles in C++, enhancing map accuracy and optimizing algorithms by integrating GPS data, resulting in improved performance compared to the baseline (ORB-SLAM2)

Work Experience

Morgan Stanley Capital International (MSCI) — Research Intern (Seoul, South Korea) Mar 2024 – Aug 2024

- Led a pilot project to automate the ratings system by developing data pipelines, implementing NLP techniques, and building machine learning models, including SVM and fine-tuned BERT
- Developed a Python-based document search tool to streamline the retrieval of sentences with specified keywords from 10-K and corporate reports, significantly reducing manual review time for dozens of senior analysts.
- Automated due diligence, web scrapping, corporate report translation, GIS & asset mapping using Python

United Nations — Research & Data Intern (Seoul, South Korea) Aug 2023 – Feb 2024

- Generated statistics for over 5 international conferences from diverse datasets, such as ILO, World Bank, DHS
- Conducted statistics training workshops for government officials from ASEAN countries, covering topics from basic statistical concepts to logistic regression, using R

Cisco Systems — Technical Engineer Intern (Seoul & Singapore) Jun 2023 – Aug 2023

- Applied expertise in computer networking, cloud computing, & hardware to drive pre-sales support across APAC

Purdue University — Visiting Scholar at Dept. of Computer & IT, (Indiana, USA) Apr 2022 – Aug 2022

- Researched Perception in Autonomous Driving, developed systems in C++, utilizing Lidar & RGB-D cameras

PwC — IT Auditor Intern (Seoul, South Korea) Jan 2022 – Feb 2022

- Data engineering; Preprocessed large-scale ledger data from 60 companies, using SQL, VBA, and Excel

Academic Achievements

Maroon Scholarship, Division of The Social Sciences, The University of Chicago (\$60,000) 2024
Purdue University Visiting Scholar Fellowship 2022