

SANGJUN (SAMUEL) Ko

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EDUCATION

University of Illinois at Urbana-Champaign

Bachelor of Science in Statistics (CGPA: 3.83/4.00)

Champaign, Illinois

January 2023 - May 2025 (Expected)

- Mathematics & Data Science Minor

University of Michigan-Shanghai Jiao Tong University Joint Institute

Bachelor of Engineering in Mechanical Engineering (CGPA: 3.50/4.00)

Shanghai, China

September 2019 - December 2020

- First Class Scholarship

WORK EXPERIENCE

Applied Technologies for Learning in Arts & Sciences

AI/ML Intern Team Leader

Champaign, Illinois

January 2024 - Present

- Lead a team of 5 interns.
- Develop predictive machine learning models with large data sets(100,000+ entries) using Python
- Utilize advanced techniques: XGBoost, Random Forests, Regression, Neural Networks, BERT, Transformers
- Collaborate closely with 3 coordinators in weekly meetings to align project goals and track progress

STAT107 Data Science Discovery

Course Assistant

Champaign, Illinois

August 2023 - Present

- Facilitate learning for over 1000 students by assisting students in grasping fundamental data science concepts by conducting interactive sessions, and providing clarifications on course materials
- Manage Git for learning platform modifications, benefiting 1000+ students; create, edit, and proofread course materials
- Collaborate with a team of 100+ staff and 2 professors in weekly meetings

KM Internacional S.A.

Intern

Managua, Nicaragua

May 2023 - August 2023

- Oversaw comprehensive inventory management and streamlined administrative tasks for a small textile company
- Lead a team of three workers to achieve a 98% accuracy rate in record-keeping and a 15% reduction in operational costs

Korean Augmentation to the United States Army Program

Soldier

Gyeonggi-do, South Korea

Jun 2021 - Dec 2022

- Demonstrated exceptional service in the "Korean Augmentation to the United States Army" program, completing a rigorous 18-month military assignment.
- Maintained and operated an M1 Abrams Tank, showcasing expertise as a Tank Infantry Soldier within the 2nd Squadron, 13th Cavalry Regiment.
- Streamlined inventory management operations as an S-4 Soldier within the 176th Financial Management Support Unit, ensuring accurate and efficient financial processes.

Istmo Textiles S.A.

Intern

Masaya, Nicaragua

Feb 2021 - Mar 2021

- Worked as an intern in a Textiles Corporation mainly learning about the social responsibility of corporations; human rights, labor laws, environmental laws, and industrial safety laws.
- Studied the import and export of clothing and textiles from Central America to North America.
- Attended corporate social responsibility activities scheduled by the corporation aimed at supporting impoverished schools and churches in Masaya, Nicaragua, by providing school supplies and food.

PROJECTS / AWARDS

3rd Place, 2024 COVID Information Commons Student Paper Challenge

September 2024

- Analyzed the socioeconomic and mental health impacts of COVID-19 in Mexico, identifying that 42% of females and 40% of young adults faced job loss.
- Proposed data-driven interventions to support vulnerable groups through geospatial and statistical analysis.

Paraphrase Detection

July 2024

- Achieved 90%+ accuracy in paraphrase detection using BERT, RoBERTa, and SBERT models on the MRPC dataset
- Developed a Gradio interface for real-time paraphrase detection, facilitating easier evaluation of textual similarities for academic and business use cases.

International Student Forecasting

April 2024

- Processed and analyzed large-scale student enrollment data (over 100,000 entries) from UIUC to identify trends and patterns

- Suggested resource allocation optimization by forecasting international student numbers using linear regression and deterministic processes

Titanic Machine Learning Model

February 2024

- Developed a predictive model with an 80% accuracy using Python to determine factors influencing survival rates in the Titanic disaster using passenger data
- Identified sex and passenger class as significant survival factors through feature importance analysis

SKILLS

Languages:	English (Fluent), Spanish (Fluent), Korean (Fluent), French (Basic), Chinese (Basic)
Computer:	Python (Advanced): Pandas, NumPy, Scikit-learn, TensorFlow, NLTK, Matplotlib, Seaborn, BERT, Random Forest, XGBoost, Gradio R (Intermediate): Tidyverse, ggplot2, dplyr, caret Git (Intermediate), SAS (Basic), Tableau (Basic), SQL (Basic), Office (Advanced)
Certificates:	Data Science DISCOVERY, Data Science Certificate, Coursera Business Analytics Certificate

COMMUNITY SERVICE AND EXTRACURRICULAR ACTIVITIES

Treasurer in Performance UIUC Touch

February 2023 - May 2024

- Strategically plan and execute 10 fundraising initiatives to support team activities, costumes, and travel expenses, resulting in a 30% increase in available funds compared to the previous year
- Contribute to the artistic success of the team by actively participating in weekly practices, refining dance routines, and honing performance skills.
- Showcase talent by performing at renowned events elevating the visibility of Performance UIUC Touch within the dance community and attracting 100+ new followers on social media platforms

Translator for the US Army

June 2021-December 2022

- Served as a translator for over 2,000 US soldiers and Korean soldiers during joint USFK training exercises

President of Asian Culture Club

Nov 2018-Mar 2019

- Lead a group of 5 students in a club that aimed to encourage a multicultural environment in a Latin American high school.
- Arranged a meeting every week and prepared an activity every month.

Volunteer in Habitat For Humanity

Sep 2016-Jun 2017

- Volunteer in a school club with the main purpose of providing general maintenance and basic necessities to the poor regions in Nicaragua.
- Participated in construction of 15 homes and hygienic systems.

Teacher at Nanum School

Aug 2016-Dec 2016

- Part of a group of teachers in a local school organized by our Korean Presbyterian Church.
- Taught English and Math to children of ages 5-12 in Masaya, Nicaragua