

Samuel Lee

CURRENT UNIVERSITY STUDENT

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Education

Columbia University

MS IN COMPUTER SCIENCE – THESIS

Focused Research Areas: Causal Inferences

New York City, NY

Graduation: Dec 2026

Northwestern University

BA IN COMPUTER SCIENCE – GPA: 3.974 /4.0

Focused Research Areas: Causal Inferences – Adjusting for Measurement Bias from Unobserved Confounders; Deep Learning Models for Large Scale EHR

Evanston, IL

Graduation: Dec 2024

Experience

Intuit Inc

SOFTWARE ENGINEER INTERN

- Proposed and implemented persistence enhancements to current API functionalities (Java) to more efficiently handle large-scaled (200K) transactions daily
- Designed and optimized resiliency in the backend (Java) to catch + retry unpublished transactions (Kafka), improving platform robustness for every-day use
- Ensured automation and 100% adherence to schedule by deploying persistence and resiliency onto schedulers using AWS and Kubernetes
- Understanding the codebase of financial products, contributing new features, and fixing other contributors' bugs
- Tools: Java, PostgreSQL, OracleDB, Apache Kafka, SpringBoot, AWS, Kubernetes

Mountain View, CA

June 2024 - Aug 2024

Northwestern Computer Science

MACHINE LEARNING AND CAUSAL INFERENCE RESEARCH ASSISTANT

- Building advanced Machine Learning models (e.g. Deep Learning, Large Language Models) to impute unknown confounders for causal relationships
- Applying causal methodologies (e.g. measurement error + noisy proxy predictions) to examine causality between TTE, mortality, and smoking proxy
- Technologies and Tools: Transformers (i.e. BERT), Python, PostgreSQL(DB), PyTorch

Evanston, IL

Jan 2023 - Present

Ford Motor Company

SOFTWARE ENGINEER INTERN

- Machine Learning features pipeline: developed an end-to-end pipeline that collects 1000+ KPI data generated from infotainment system in vehicles and visualize them through a monitoring dashboard.
- Collected requirements from senior engineers, proposed the design of the system, and received approval from the tech leadership.
- Selected for presentations for my work to senior leadership.
- Tools: Python, JavaScript, NodeJs / Express, ReactJS, MongoDB, Microsoft Azure CosmosDB, NoSQL, MySQL

Dearborn, MI

June 2022 - Aug 2022

Publications

Contro. for Unobserved Confounding with Large Language Model Classification of Patient Smoking Status

(Under Review), SAMUEL LEE AND ZACH WOOD-DOUGHTY

Dec 2024

- Github Repo:** https://github.com/controllingunobservedpaper/NEURIPS_submission_2024
- Selected for Oral Presentation at Advancements in Medical Foundation Models (AIM-FM) Workshop @ NeurIPS 2024 (7 out of 81)
- Paper link:** <https://arxiv.org/abs/2411.03004>
- Check out this **shoutout** from NU Engineering for the paper!

Exploring to Learn Winning Strategy, SAMUEL LEE, JULY 2019, IADIS INTERNATIONAL CONFERENCE GAME AND

ENTERTAINMENT TECHNOLOGIES 2019 (GET'19)

July 2019

- Award – Encouragement Award** from GET'19.
- Github Repo:** <https://github.com/penguinman6678/AI4Fun>

Skills

Programming Languages

Python, Java, Javascript, SQL, C

Tech Tools

PyTorch / Tensorflow, Shell Scripting, Flask, React.js, Node.js, Express, SpringBoot, Git, GitHub

Systems + Cloud

Apache Kafka, AWS – EC2, Lambda, RDS; DBMS – NoSQL, MySQL, PostgreSQL, MongoDB, CosmosDB, PineconeDB

Languages

English, French, Korean