CHRIS LAM

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SUMMARY

My research is on how to apply systems thinking, causal inference, and machine learning to build more responsible and trustworthy AI systems. In particular, my interest is in understanding how these analytical techniques could help us to solve the algorithmic bias, fairness, and discrimination problem. This could provide us with insights into how to build highly regulated AI systems that are more accurate, transparent, and fair.

EXPERIENCE

Epistamai (Startup) 2022 - Present
Founder and CEO *Apex, NC*

· Researched how to model bias from the data generating process by applying systems thinking and causal inference to supervised machine learning.
· Developed and patented an algorithm using causal AI to debias data and prevent digital redlining.
· Presented research on how to model bias and discrimination in supervised machine learning models using causal Bayesian networks.

Federal Reserve Bank of Chicago 2015 - 2021
Data Scientist *Chicago, IL*

· Researched algorithmic bias in credit decisions by linking causal inference to machine learning.
· Led the Chicago Fed's analytics team, consisting of data analysts, engineers, and architects.
· Managed data science and business intelligence projects to enhance the Fed's operations and research.

Uptake Technologies (Startup) 2014 - 2015
Product Manager *Chicago, IL*

· Hired as the fifth employee of a unicorn $2.3B startup with over 250 employees.
· Designed a big data platform to perform predictive maintenance of industrial machinery.
· Researched statistical learning models and created visualizations of Industrial Internet of Things data.

Hewlett Packard 2012 - 2013
Technology Strategist *Houston, TX*

· Developed commercialization strategy on emerging technologies for HP's Commercial PC division.
· Managed technology roadmap and served as technical subject matter expert for senior management.
· Partnered with large tech companies and startups to identify innovation opportunities.

Consumer Reports 2004 - 2011
Project Leader *Yonkers, NY*

· Performed testing of consumer electronics and generated product recommendations.
· Designed and analyzed surveys to measure product reliability and tech support satisfaction.
· Applied lean techniques to streamline testing operations and reduce project cycle time.

EDUCATION

Northwestern University (Kellogg)   Jun 2015
MBA Marketing, Analytics, and Economics   *Evanston, IL*

Columbia University   Jan 2011
MS Electrical Engineering   *New York, NY*

University of Pennsylvania   May 2004
BSE Computer Science and Engineering   *Philadelphia, PA*

STANDARDS

IEEE P3591 Causal Standard for Fair Decision Making
Chair of IEEE Causal Decision Making Working Group (C/AISC/CDM-WG)

PUBLICATIONS

Lam, Chris. (2024) Debiasing Alternative Data for Credit Underwriting Using Causal Inference.
2024 ACM International Conference on AI in Finance (ICAIF'24),
Workshop on Explainable AI in Finance (XAIFIN2024). New York, NY.

Lam, Chris. (2024) A Systems Thinking Approach to Algorithmic Fairness.
2024 International System Dynamics Conference (ISDC2024). Bergen, Norway.

PRESENTATIONS

Bloomberg-Columbia Machine Learning in Finance Conference, New York, NY   Sep 2025

International System Dynamics Conference (ISDC2025), Boston, MA   Aug 2025

American Causal Inference Conference (ACIC), Detroit, MI   May 2025

NCSU Data Science and AI Education Research Forum, Raleigh, NC   Mar 2025

Duke Responsible AI Symposium, Durham, NC   Feb 2025

ACM International Conference on AI in Finance (ICAIF'24), New York, NY   Nov 2024
Workshop on Explainable AI in Finance (XAIFIN2024)

AI @ NC State: Hot Topics, Raleigh, NC   Oct 2024

International System Dynamics Conference (ISDC2024), Bergen, Norway   Aug 2024

The National Consortium for Data Science: Databytes, Chapel Hill, NC   Dec 2023

The National Consortium for Data Science: Databytes, Chapel Hill, NC   Jun 2023

PATENTS

Bias Reduction in Machine Learning Model Training and Inference   Apr 2024
US Patent US11966826B2

CERTIFICATIONS

New York State Professional Engineer (PE)

Six Sigma Black Belt (SSBB)

Project Management Professional (PMP)

Certified ScrumMaster