

Thomas Lohman

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EDUCATION

The University of Notre Dame

Master of Science, Computer Science and Engineering | **Graduate GPA:** 3.90/4.0

May 2025 – May 2026

- Specialization: Machine Learning and Data Science
- Relevant Coursework: Advanced Machine Learning, AI & Social Good, Large Language Model Practices, Investment Theory, Equity Valuation, Options and Futures, Thesis Direction

Bachelor of Science, Computer Science and Engineering | **Undergraduate GPA:** 3.75/4.0

Aug 2021 – May 2025

- Minor: Engineering Corporate Practice | Study Abroad: London (June 2022 – August 2022)
- Relevant Coursework: Machine Learning, Corporate Finance, Intro To Accounting, Neural Networks, Database Concepts
- Activities and Leadership: Club Volleyball, Student International Business Council, Volunteer Middle School Tutor, DataFest

RELEVANT EXPERIENCES

Data Scientist – NASA SADE (Safety Aware Drone Ecosystem)

Jan 2026 – May 2026

Generative AI Teaching Assistant - ND CSE Department

Jan 2026 – May 2026

Intro to AI Teaching Assistant - ND CSE Department

May 2024 – May 2026

- Assisted in the teaching of content including AI search algorithms, Bayesian statistics, Markovian models, basics of machine learning, and deep learning principles
- Lectured to over 100 students on topics including neural networks, backpropagation, clustering, and dimensionality reduction
- Hosted weekly office hours to aid students in course material comprehension and technical programming
- Developed questions, answer keys, rubrics, and code outlines for course assignments and exams

Vice President (formerly Treasurer) - ND Men's Club Volleyball

Aug 2022 – May 2025

- Guided biweekly executive board meetings to coordinate travel and tournament logistics, practice plans, and budget reviews
- Budgeted and managed funds for ND men's club volleyball, raised over \$11,000 dollars from 125+ donors in 5 days

Undergraduate Research - ND CSE Department

Aug 2024 – Dec 2024

- Created and analyzed social networks from a dataset of ~2.5 billion rows
- Developed a methodology for evaluating the similarity of publications to select networks for comparison

Data Science Intern - 1st Source Bank

Jan 2024 – July 2024

- Developed new methods for classifying the bank's primary customers using over 15 years of customer data
- Built a logistic regression model predicting the classification of primary customers with over 85% testing accuracy

Technical Market Analyst Intern - Idea Center Notre Dame

Aug 2023 – May 2024

- Conducted market research to identify opportunities for the commercialization of professors' research

PROJECTS

Machine Learning for Transaction Cost Aware Portfolio Allocation – Thesis Direction

Jun 2025 – May 2026

- Designed and implemented machine learning models to optimize portfolio allocation, incorporating transaction costs as inputs to the model to reduce portfolio turnover and minimize slippage, enhancing net-of-cost performance for large-scale capital deployment
- Conducted empirical analysis using CRSP data to benchmark performance against traditional Markowitz mean-variance portfolios, evaluating Sharpe ratios, turnover, and implementation shortfalls

Multimodal Generative System for Effective Language Learning – Advanced Machine Learning

Jan 2025 – May 2025

- Designed a multi-agent language learning system including a LLM as a conversational agent, real-time translation pipeline, and lightweight image generation to simulate immersive conversational experiences
- Implemented constrained decoding through adaptive logit biasing to enforce language level alignment in conversation

ADDITIONAL INFORMATION

Programming Languages: Python, C, SQL, MATLAB, JavaScript, Unix shell scripting

Software and Libraries: PyTorch, TensorFlow, LangChain, Numpy, Pandas, Scikit-learn, Git, Linux, Node.js, Django

Skills: Market Research, LLM Prompt Engineering, Excel, PowerPoint

Conferences: Columbia AI in Real Estate Student Seminar, CREtech New York 2025

Interests: Volleyball, No Limit Texas Hold'em, Game Theory, Pokemon, Basketball, Travel