

# Thomas Lohman

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## EDUCATION

### The University of Notre Dame

**Master of Science, Computer Science and Engineering** | **Graduate GPA:** 3.82/4.0

**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 – DroneResponse**

**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 - 1<sup>st</sup> 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**

**June 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

**Multiagent AI 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

Link to additional projects: [Brief Project Portfolio Overview](#)

## 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