

Thomas Hoang

United States | 7407841771 | hoang_t2@denison.edu | [Linkedin](#) | [Webpage](#)

Summary

Data-driven AI/ML professional with broad experience designing algorithms that rank, forecast, and extract signals from complex datasets. Proven record of shipping analytical and retrieval systems, leading applied research, and adapting models to business, trading, and management contexts.

EDUCATIONAL BACKGROUND

Denison University, Granville, OH

Dec 2025

Bachelor of Arts, Computer Science and Applied Mathematics

- **Achievements:** Denison Alumni Award (2021), Anderson Science Scholar Award (2022), Crown Fellowship Award (2023), Conrad E Ronneberg Scholarship (2024), John & Mary Alford Scholar (2024), Denison Grants Award (2025)
- **Coursework:** Non-Linear Indistinguishability Query (Independent Research, Senior Research), Data Systems, Software Engineering, Advance Algorithm Designs, Time Series Analysis, Linear Algebra, Applied Statistics, Cryptography, Statistical Modeling

PUBLICATION

- Thomas Hoang.GNN: Graph Neural Networks and Large Language Models for Data Discovery.(GNN, LLM, Data Mining, Data Systems, Data Markets, Data Science/Analytics)
- Thomas Hoang.PLOD: Predictive Learning Optimal Data Discovery.(Data Mining, Database, Data Systems, Data Markets, Data Science/Analytics)
- Thomas Hoang.BOD: Blindly Optimal Data Discovery.(Data Mining, Database, Data Systems, Data Markets)
- Cong Hoan Nguyen, Thomas Hoang*, Hoang Long Nguyen.SemiRAG: Dual-traversal Retrieval Augmented Generation for Semi-structured Data.(GraphRAG, LLMs, Leiden, Ego K-hop, Mixture Of Experts) (under review, WWW conference)

WORK AND RESEARCH EXPERIENCES

Stealth AI Startup | AI Research Scientist

May 2025 - Present

- Developed and deployed retrieval framework, leveraging Graph-based Retrieval-Augmented Generation (Graph RAG), Large Language Models (LLM) and Mixture of Experts (MOE) to optimize information retrieval accuracy and efficiency. (LLM, Graph, RAG, MOE, ego K-hop)
- Engineered advanced prompting techniques to enhance retrieval correctness, significantly improving reasoning performance and reliability in knowledge-intensive applications. (Knowledge representation and reasoning)

Climate Change Health Intelligence lab | Research Intern

May 2024 - Aug 2024

- Created and implemented BERT-based and LDA models for analyzing over 400,000 tweets during Hurricane Harvey, improving data analysis and machine learning processes. (NLP, LDA Topic Modeling, BERT model)
- First-authored two publications, demonstrating expertise in AI/ML and mathematics, and contributing to disaster impact analysis. (Knowledge Graph, GNN, LLM)

(Costco Wholesale) FPT Americas | Data Engineer Intern

May 2023 - Aug 2023

- Implemented data manipulation operations, including joins, sub-queries, aggregations, and stored procedures, contributing to improved data processing and analysis. (SQL Server)
- Organized and processed large volumes of data, ensuring data quality, security, and compliance. (Azure Synapse Analytics)

Denison University | Anderson Undergraduate Researcher

May 2022 - Aug 2022

- First-authored a publication in designing multi-criteria decision-making algorithms to narrow down a large database of over a million items to select a few optimal items. (Database Query Processing Algorithms)
- Generalized query processing algorithm to a broad set of three functions, including convex, concave, and CES. (Polynomials, Exponential, Logarithmic Functions)
- Approximated user's utility functions to a reasonable degree of precision, using artificial tuples with provable bounds, by asking more questions on interactive phases. (C++, Python)

TECHNICAL SKILLS

- **Programming Languages:** C/C++, C#, Python, SQL, R
- **Mathematics and Algorithms:** Non-linear Algorithms, Advanced Data Structures And Algorithms, Time Series Analysis, Statistical Modeling
- **Others:** LLMs, Prompt Engineering, ASP MVC, .NET framework, Fluent API, LINQ method, Design Pattern, Unit Test skills, communication, Recommendation Systems

Extracurricular

Chess (Elo About 2100), Scuba Diving (Open Water), Soccer, Reading Psychology Books.