THOMAS HOANG

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EDUCATIONAL BACKGROUND

Denison University, Granville, OH — Graduation: Dec 2025

Bachelor of Arts in Computer Science and Applied Mathematics

Denison Alumni Award (2021), Anderson Science Scholar Award (2022), Crown Fellowship Award (2023), Conrad E Ronneberg Scholarship (2024), John & Mary Alford Scholar (2024).

Recommendations:

--- *Prof. Duncan Buell* (Chair Emeritus — NCR Chair in Computer Science and Engineering, **University of South Carolina**, **Email: buell@acm.org**).

--- *Prof. Ashwin Lall* (Chair — Computer Science and Mathematics, **Denison University**, **Email: lalla@denison.edu**).

--- Associate Prof. David White (Computer Science and Mathematics, **Denison University, Email: whiteda@denison.edu**).

--- *Assistant Prof. Truex Stacey* (Suzanne B. & Theodore A. Bosler Endowed Faculty Fellowship — Computer Science and Mathematics, **Denison University**, **Email: truexs@denison.edu**).

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)*
- **Thomas Hoang,** Kahf Hussain, Minh Nguyen, Dagmawi Zerihun, Ashwin Lall**. "Non-linear Indistinguishability Query"** *(Data Processing, Database, Data Systems, Analytics)*
- **Thomas Hoang,** Quynh Anh Nguyen, Hoang Long Nguyen**. "Public Health in Disaster: Emotional Health and Life Incidents Extraction during Hurricane Harvey"** *(Graph, LDA, LLM)*

SERVICES

- **Reviewer**: Reviewed submissions for the ACM International Conference on Information and Knowledge Management (CIKM), ensuring quality and rigor of research papers presented at conference. *(Big Data, Machine Learning)*

WORK AND RESEARCH EXPERIENCES

Research Intern — May 2024 - August 2024

Climate Change Health Intelligence lab, Louisville, KY

- 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)*

Data Engineer Intern — May 2023 - August 2023

(Costco Wholesale) FPT Americas, Richardson, Texas, United States

- 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)*

Anderson Undergraduate Researcher May 2022 - August 2022

Denison University "Non-linear Indistinguishability Query"

- 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)*

Research Assistant May 2020 - May 2021

The University of Tartu, Tartu , Estonia

- Conducted research on the, Subordinate And Supervisor Relationship Through the Lens of Guanxi: First Empirical Research in Vietnam, publication, supervised by Dr. Quan Hoang Nguyen Tran. *(Economics and Business Administration)*
- Fulfilled 100% KPIs with quality and quantity of collecting data from different types of employment, including C-levels, managers, and employees, and making judgments in analysis. *(Leadership, Teamwork, Communication)*

Software Engineer Intern October 2020 - March 2021

(FVille), FPT Software, Hanoi, Vietnam

- Designed one complete website with a database and APIs among layers, satisfying integration model, security, and repository design pattern. *(.NET Framework, C#, OOP, Javascript, HTML5, CSS3, Bootstrap, Fluent API, Design Pattern, unit test, SQL Server)*
- Developed one web-based application followed by web service and layered architecture based on MVC. *(ASP. NET MVC)*

TECHNICAL SKILLS

- Programming Languages: C/C++ | C# | Python | SQL | R.
- Database: SQL Server | Azure SQL.
- Mathematics and Algorithms: Non-linear Algorithms | Advanced Data Structures And Algorithms | Time Series Analysis | Statistical Modeling.
- Others: ASP MVC | .NET framework | Fluent API | LINQ method | Design Pattern | Unit Test skills | Low-Code Outsystems.

RELEVANT COURSEWORK

- **Denison University:** Non-Linear Indistinguishability Query *(Independent Research)*, Data Systems, Software Engineering, Advance Algorithm Designs, Time Series Analysis, Linear Algebra, Applied Statistics, Cryptography.
- **Self-learning Skills:** Vector Database, Machine Leaning, LDA Topic Modeling, Bert Models, Knowledge Graphs, Data Engineering Azure, .NET Software Engineering.

ACTIVITIES

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