

Hung Tran

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EDUCATION

Virginia Tech

Ph.D. in Operations Research - Industrial & Systems Engineering
(Research Field: Stochastic Processes & Financial Engineering)

Research Advisor: Dr. Sait Tunc

Blacksburg, VA

GPA: 4.0/4.0

Denison University

Bachelor of Arts in Data Analytics and Global Commerce / Economics Minor

Honors and Awards: Magna Cum Laude, Dean's List (7 semesters), Data Analytics & Global Commerce Senior Academic Fellowship, Armacost Endowed Scholarship, Van Beuren Music Honored Scholarship.

Granville, OH

GPA: 3.84/4.0

SKILLS

Programming Languages: Python | R | C/C++ | SQL | STATA | CPLEX | AMPL | \LaTeX

Software Proficiency: VS Code | R - Studio | Gurobi | GitHub | Tableau | Microsoft 365 | Agile Scrum

Language Proficiency: Vietnamese (Native speaker) | English (Proficient user) | Spanish (Intermediate user)

RELEVANT COURSEWORK

ISE Courses

ISE5405: Optimization I : Linear Programming
ISE5406: Optimization II: Non-linear Programming
ISE5034: Probability and Statistics for ISEs
ISE5424: Simulation I
ISE5414: Random Process
ISE6454: Stochastic & Robust Optimization

Mathematics/Data Analytics Courses (Denison University)

MATH213: Linear Algebra & Differential Equations
MATH472: Bayesian Statistical Inference
DA350: Prescriptive Analysis for Business Analytics
GC301: Global Financial Markets
ECON467: Time Series Analysis in Labor Economics

PROFESSIONAL EXPERIENCE

Denison University | Data Analytics Program

Senior Research Fellow

Granville, OH

August 2023 – May 2024

- Designed 2 Multi-Arm Bandit (MAB) simulation models to increase 10% - 20% on web advertising algorithms.
- Tackled 10+ mathematical problems relating to Knapsacks, Graph Coloring, & Facility Location algorithms.
- Compared 3 corpora in cinema industries, job markets, & game genres utilizing Spacy's text classification.
- Programmed an ASL classification & translation model utilizing Temporal Graph Convolutional Network.

Academic Researcher

August 2022 - August 2023

- Conceptualized 2 portfolio optimization algorithms with GurobiPy to reduce investment risk by 5%.
- Remodeled 2 optimization models applying Traveling Salesman to ameliorate 15% of aviation problems.
- Designed 5 classification models utilizing Computer Vision (OpenCV) to differentiate 50 bird types.
- Developed CNN models with Scikitlearn, Keras, & TensorFlow for text analysis and image classification.

Morningstar, Inc.

Equity Indexes Analyst Intern

Chicago, IL

June 2023 – August 2023

- Formulated optimal outputs satisfying clients' requests via analyzing time-series database on DBeaver SQL.

- Constructed 5 financial investment reports utilizing calculation algorithms on Morningstar Direct software.
- Managed data migration of 100+ Equity Indexes rulebooks to optimize Morningstar's client experience.
- Led five-person team to formulate case study solving issues about global DEI leadership initiatives.

Licking County Government Office

Data Analytics & GIS Specialist Intern

Newark, OH

August 2022 – May 2023

- Conducted data dissections of 970 data points of fatal & seriously injured traffic accidents in Licking County.
- Forecasted potential crashing locations by applying Travelling Saleman optimization and Time Series Analysis.
- Produced GIS 2-D maps to visualize 143 – 300+ crash data points on public infrastructures in 12 years.
- Presented data analysis and technical arguments in quarterly Transportation Policy Committee meetings.

TEACHING EXPERIENCE

Virginia Tech | Grado Department of Industrial & Systems Engineering

Graduate Teaching Assistant - ISE2024: Probability Foundations for ISEs

Blacksburg, VA

August 2024 – Present

- Manage 10 grading tasks for 150 undergraduates in 2 sections.
- Hold 3 recitation sessions to review probability distribution and conditional probability before midterms.
- Establish two office hour sessions addressing students' questions and concerns.
- Accommodate students with special physical and mental needs during the class and exam time.

Denison University | Data Analytics Program

Department Teaching Assistant – DA353: Advanced Prescriptive Analysis

Granville, OH

August 2023 – May 2024

- Advised 25 students in building 10 linear and non-linear optimization models.
- Demystified mathematical concepts behind optimization algorithms such as Traveling Salesman, Gradient Descent, Markowitz Portfolio Theory, Pareto Optimal Frontier, etc.
- Organized datasets and lab instructions before weekly lab components.
- Overhauled code syntax and software installation on local computers.

Denison University | Global Commerce Program

Teaching Assistant – GC301: Global Financial Market

Granville, OH

August 2022 - May 2024

- Manage 150 students with class material advising in theories of global equity and securities.
- Design 8 mock exams for midterms and finals by collaborating with two global commerce professors.
- Launch 20 extra review sessions for students about financial structures and stock management.
- Evaluate students' ideas for 5-year investment plans and portfolio management projects.

Denison University | Department of Computer Science & Mathematics

Teaching Assistant – DA/MATH220: Applied Statistics

Granville, OH

June 2023 – August 2023

- Designed personal coaching sessions in R-studio, Anaconda, and Tableau Desktop to help students with data visualization.
- Prepared answer sheets to help students with homework and exams in Linear Regression model and ANOVA analysis.
- Held 4 weekly office hours for class discussion to provide support for 10 students with communication difficulties.
- Advised 24 students on making suitable schedules to optimize time and enhance studying efficiency.