Hung Tran

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SKILLS

- **Programming Languages:** Python | R | C++ | SQL | CPLEX | AMPL | LaTeX | STATA
- **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:** Linear & Nonlinear Programming, Statistical Inference, Stochastic Optimization, Advanced Simulation, Stochastic Dynamics, Advanced Probability, Random Process.

EDUCATION

Virginia Tech — **Blacksburg, VA**
Ph.D. in Operations Research - Industrial & Systems Engineering — GPA: 4.0/4.0
(Research Field: Stochastic Processes & Financial Engineering)
Research Advisor: Dr. Sait Tunc

Denison University — **Granville, OH**
Bachelor of Arts in Data Analytics and Global Commerce | Economics Minor — GPA: 3.84/4.0
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.

PROFESSIONAL EXPERIENCE

Virginia Tech | Department of Industrial and System Engineering — **Blacksburg, VA**
Graduate Research Assistant — *August 2024 – Current*

- Formulate the finite-horizon, discrete-time incentive mechanism on heterogeneous delay discounting factors.
- Develop 2 deep deterministic policy gradient algorithms to capture the volatility of US large-cap stock market.
- Design Physics-Informed Neural Network to identify stock non-Markovian patterns for portfolio optimization.
- Conduct preliminary findings on the behaviors of quantum price level in stochastic portfolio optimization.

Denison University | Data Analytics Program — **Granville, OH**
Senior Research Fellow — *August 2022 – May 2024*

- Designed 2 Multi-Arm Bandit (MAB) simulation models to increase 10% - 20% on web advertising algorithms.
- Conceptualized 2 portfolio optimization algorithms with GurobiPy to reduce 5% investment risk.
- Remodeled 2 optimization models applying Traveling Salesman to ameliorate 15% of aviation congestion.
- Developed CNN models with Scikitlearn, Keras, & TensorFlow for portfolio management.

Morningstar, Inc. — **Chicago, IL**
Equity Indexes Analyst Intern — *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 — **Newark, OH**
Data Analytics & GIS Specialist Intern — *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.