

Benjamin (Ben) T. Zabriskie

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EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY

Atlanta, GA

Master of Science in Computational Data Analytics

August 2024-Exp. Graduation May 2025

- Coursework: Machine Learning, Data Science for Epidemiology, Analytics Modeling, Regression Analysis

Bachelor of Science in Aerospace Engineering

August 2024

- GPA: 4.00

SKILLS

- Languages:** Python (Pandas, NumPy, TensorFlow, SciPy, NetworkX, Matplotlib), SQL, MATLAB, Java, R, PHP
- Modeling:** Supervised (Regression, kNN, Random Forest), Agent Based, Optimization (Gradient Descent, Stochastic), Unsupervised (K-means, Graph Clustering), Deep Learning (Neural Networks, Diffusion Models)

EXPERIENCE

Georgia Tech Graduate Education

Atlanta, GA

Graduate Teaching Assistant for Computing for Data Analysis

August 2024-Present

- Hold office hours, validate & proctor exams and answer questions for 1500 online graduate students in Python course

Delta Air Lines

Atlanta, GA

Propulsion Engineering Co-op

January 2022-August 2023

- Term 1 – Engine Test Database Tool: Used JavaScript and SQL to develop and implement database and data entry system for 10 performance metrics from each engine run in Minneapolis; digitized 15 years of paper records into database
- Enabled tracking of engine maintenance programs in interface by automatically performing statistical analysis of engines
- Term 2 – Route and Pilot Behavior Optimization: Evaluated 8 years of flight data for Delta Rolls Royce fleets with Python and Excel to identify potential route and pilot behavior changes with potential for \$7 million cost savings annually
- Term 3 – Test Database Expansion: Extended Minneapolis database analysis tool to much larger Atlanta test cell using SQL, JavaScript, PHP, and Python to consolidate data from 1000s of previous engine tests and automatically incorporate and analyze data from 20 new tests a week; tool reduced analysis time from 3 hours to 2 minutes for each engine
- Researched and evaluated \$100k capital investment into thermal imaging systems to detect leaks during engine test

Northern Purchase, LLC (Search Fund)

New York City, NY

Private Equity Intern

May 2023-August 2023

- Analyzed CIM for 6 LBO opportunities, focusing on financial statements, business model & market competitors

ANALYTICS RESEARCH

Computational Engineering Research Group at Georgia Tech

Atlanta, GA

Undergraduate Modeling and Simulation Researcher

January 2024-Present

- Created surrogate model of Monte Carlo simulation of HIV outbreak to improve model performance and capabilities
- Developed implementation in MATLAB that is 100x faster than original model with same accuracy and with 1/10th the lines of code; described original model using Markov chain

Georgia Tech Controls and Machine Learning Laboratory

Atlanta, GA

Undergraduate Researcher

January 2023-May 2023

- Created optimized algorithm leveraging neural networks to inform how an airfoil should change shape in flight
- Used fluid dynamics software to create set of 10,000 data points & trained TensorFlow neural networks to create 8 parameter functions that predict 3 aerodynamic coefficients for different airfoil profiles and flight conditions

Ben T. Zinn Combustion Laboratory

Atlanta, GA

Undergraduate Researcher

January 2021-December 2022

- Ran computational combustion simulations & analyzed 100,000 points/test of turbulent flame data in MATLAB
- Built and maintained combustion rig; performed problem analysis when experiments failed

LEADERSHIP

Outdoor Recreation at Georgia Tech (ORGT)

Atlanta, GA

Staff Trip Leader

November 2022-Present

- Responsible for planning and safely leading mountain biking trips for 25 Georgia Tech students per trip
- Certification in Wilderness First Aid (WFA); 20 hour specialized course in addition to CPR and first aid training