

EDUCATION

Georgia Institute of Technology
B.S. in Mathematics and Computer Science (GPA: 3.77)

Projected Graduation Date: May 2025 | Atlanta, GA

Relevant Upper Coursework:

Deep Learning (Current); Database Systems (Current); Machine Learning (Current); Statistical Theory; Mathematics of Data Science; Information Theory; Artificial Intelligence; Probability Theory; Design and Analysis of Algorithms

SKILLS

Programming Languages: *Proficient* in Python, LaTeX, Java. *Familiar* with SQL, MATLAB, C.

Libraries, Frameworks, Etc.: Scikit-learn, PyTorch, Keras, Pandas, NumPy, SciPy, Matplotlib, Seaborn, Git.

Concepts: Machine Learning, Deep Learning, Data Science, AI, Relational Databases, Data Structures, Algorithms, OOP, VCS

Other: Passion, Analytical, Collaboration, Enthusiasm, Initiative, Adaptability

RESEARCH EXPERIENCE

RESEARCH EXPERIENCE FOR UNDERGRADUATES | Researcher

Raleigh, NC | May 2023 - Aug 2023

- Attended the NSF and NSA sponsored research program (REU) at the Dept. of Math at NC State University.
- Researched parameter estimation and analysis using biologically-informed neural networks and equation learning to obtain a mathematical model for an agent-based model with added adaptive behaviors.
- Developed a computational pipeline in Python which implements custom informed neural networks using PyTorch and applies sparse regression methods to obtain closed-form equations for an ODE approximation.
- Presented a poster on my research at the NC State Undergraduate Research Symposium.
- Awarded Best Poster Presentation for the Math and Statistics REU program.

WORK EXPERIENCE

UNITED STATES MARINE CORPS | Infantry Assaultman (E-5)

Camp Lejeune, NC | Oct 2016 - Oct 2020

- Led, mentored, and collaborated with a team of 12 Marines to prioritize mission accomplishment under hazardous working conditions and stressful environments.
- Acted as the senior representative of the Assault section for numerous training operations and two overseas deployments for a total of 15 months deployed.
- Served 4 years active duty in 2d Battalion 6th Marines, Fox Co. and honorably separated as a Sergeant/E-5.

PROJECTS

HYPERSPECTRAL DEEP DECONVOLUTION

CS 4644, Deep Learning, Georgia Tech | Aug. 21 - Present

Currently working on a course project for hyperspectral deep deconvolution using chromatically varying point spread functions (PSFs) with the goal of sharpening blurry images and retrieving spectral information via deep learning.

BIRD CLASSIFICATION WITH CNNs

MATH 4210 at Georgia Tech | Jan. 2023 - May 2023

Explored convolutional neural networks (CNNs) as a method of statistical learning on a multi-class image classification task. Implemented 3 distinct CNN models in Python using TensorFlow and the Keras deep learning library. The dataset consisted of approximately 88,000 bird images belonging to 515 different classes/species.

SIMPLE RANDOM WALKS AND ENUMERATION

MATH 3235 at Georgia Tech | Oct. 2022 - Dec. 2022

Created a paper surveying simple random walks under probabilistic and combinatorial perspectives. Showcased the Gambler's Ruin problem and multivariate generating functions as an enumeration technique.

WARRIOR SCHOLAR PROJECT

Warrior Scholar Project at Yale University | August 2020

College education preparation program for enlisted veterans transitioning to student life hosted by Yale University.

ACTIVITIES

Data Science @ GT Member of KaggleCLEF team. We compete in Kaggle competitions and practice and learn about data science.

Directed Reading Program Studied enumerative combinatorics under the guidance of a postdoctoral researcher over Fall 2022.

Georgia Tech Cycling Club Recreational mountain biking and road cycling.

AWARDS

Academic Awards

John and Susan Traendly Scholar
Zell Miller Scholar
Dean's List

Notable Military Awards

Certificate of Commendation
Meritorious Promotion
Good Conduct Medal