

ATTICUS REX

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EDUCATION

Georgia Institute of Technology Master of Science in Computational Data Analytics	Aug 2024 Atlanta, GA
<ul style="list-style-type: none">Coursework: Machine Learning, Simulation, Statistics, Linear Algebra, Network Analysis, HPC	
Virginia Tech Bachelor of Science in Mechanical Engineering, Computational Modeling & Data Analytics Blacksburg, VA	May 2023
<ul style="list-style-type: none">Awards: Summa Cum Laude (GPA: 3.83/4.0), Honors Laureate Diploma, President's List	

EXPERIENCE

Georgia Tech College of Computing Graduate Teaching Assistant	Aug 2023 – Present Atlanta, GA
<ul style="list-style-type: none">Supported faculty in CSE 6040 - Computing for Data Analytics with grading and office hours.	
NAVSEA Naval Surface Warfare Center Dahlgren Division Optimal Shock Damping for Improved Controllability of Antenna Test Fixture	Aug 2022 – May 2023 Blacksburg, VA
<ul style="list-style-type: none">Worked in specialized team to design and implement novel vibration equipment to simulate shock pulses.Achieved ~400% damping improvement and reduced cost by 80% compared to previous testing.	
Virginia Tech Department of Agriculture & Applied Economics Software Development and Data Analytics Intern	May 2022 – Aug 2022 Riobamba, EC
<ul style="list-style-type: none">Developed software to survey conservation agriculture, oversaw the maintenance and storage of data, and worked in R and Python to conduct statistics, data analytics, and data visualization.	
Virginia Tech Student Athletic Academic Support Services Math Lecturer, Tutor	Aug 2021 – May 2022 Blacksburg, VA
<ul style="list-style-type: none">Earned highest paid undergraduate position at Virginia Tech through calculus lectures.Improved student grades by 20-30% on average and attended training to improve teaching.	
Virginia Tech Data Science for the Public Good Undergraduate Research Intern	May 2021 – Aug 2021 Blacksburg, VA
<ul style="list-style-type: none">Accomplished 96-99% accuracy predicting vegetative health indices using machine learning algorithms.Reconstructed an eight-dimension poverty index for the Zimbabwe Statistical Agency and quantified poverty at the district and province level from 31,193 observations.	

PROJECTS

Evaluating Linearized Echo State Networks, SINDy Framework, and Direct Differentiation Methods for Dynamical System Modeling Blacksburg, VA	Aug 2022 – May 2023
<ul style="list-style-type: none">Successfully applied linearized Echo State Network models to improve chaotic dynamical system models.Demonstrated ~20% more accuracy than SINDy when applied to the Lorenz System.	
Eigenvalue Processing of Pendula Dynamics Blacksburg, VA	Jan 2023 – May 2023
<ul style="list-style-type: none">Created image-tracking algorithm to compute eigenvalues of pendula dynamics within 1% of theoretical.	
Dopamine, Mimicry, and Value Alignment: Artificial Intelligence and Addiction Blacksburg, VA	Jan 2023 – May 2023
<ul style="list-style-type: none">Illustrated six potential risks of drive-mimicry artificial intelligence and outlined economic externalities, ethical violations and psychological harm caused by AI-induced addiction.	

SKILLS & CERTIFICATIONS

Data Science: Python (PyTorch, Tensorflow, Numpy, Pandas, Scikit-Learn, Dask), R, Tableau, SQL, MATLAB, Julia, C/C++, Java, Git, Linux,
Engineering: Fundamentals of Engineering (FE Mechanical) Certified, CFD, FEA, CAD/CMD
Languages: English (native), Spanish (fluent)