

ATTICUS REX

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EDUCATION

Georgia Institute of Technology Master of Science in Computational Data Analytics	May 2024 Atlanta, GA
• GPA: 4.0/4.0, Coursework: Computer Science, Statistics, Applied Mathematics, Simulation/Modeling	
Virginia Tech Dual Degree: B.S. in Mechanical Engineering, B.S. in Computational Modeling & Data Analytics	May 2023 Blacksburg, VA
• GPA: 3.83/4.0, Awards: Summa Cum Laude, Honors Laureate Diploma, President's List	

EXPERIENCE

Georgia Tech College of Computing Graduate Teaching Assistant	Aug 2023 – Present Atlanta, GA
• Supported faculty with grading, Q&A and office hours in CSE 6040 - Computing for Data Analytics.	
NAVSEA Naval Surface Warfare Center Dahlgren Division Optimal Shock Damping for Improved Controllability of Antenna Test Fixture	Aug 2022 – May 2023 Blacksburg, VA
• Technical lead 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
• 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
• 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
• 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 Advisor: Serkan Gugercin, Ph.D.	Aug 2022 – May 2023 Blacksburg, VA
• 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 Advisor: Mark Embree, Ph.D.	Jan 2023 – May 2023 Blacksburg, VA
• Created image-tracking algorithm to compute eigenvalues of pendula dynamics within 1% of theoretical.	
Discovering Epidemiological ODE Models from Data CSE 8803 – Epidemiology Term Project, Instructor: B. Aaditya Prakash	Jan 2023 – May 2023 Blacksburg, VA
• Applied modern advances in symbolic regression algorithms to demonstrate that governing Ordinary Differential Equation models could be reliably recovered from highly noisy nonlinear data.	

SKILLS & CERTIFICATIONS

Engineering: Fundamentals of Engineering (FE Mechanical) Certified, CFD/FEA, Solidworks, Controls
Data Science: Python (PyTorch, Tensorflow, Numpy, Pandas, Scikit-Learn, Dask), R, Tableau, SQL, MATLAB, Julia, C/C++, Java, Git, Linux, Optimization, Model Reduction, Parallel Computing, Web-Scraping
Languages: English (native), Spanish (fluent)