ATTICUS REX

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EDUCATION

Georgia Institute of Technology May 2024 - Present
PhD Student in Computational Science & Engineering Atlanta, GA
- GPA: 4.0/4.0, MSA Fellowship Award Recipient, Home Unit: Aerospace Engineering

Virginia Tech May 2023
B.S. in Mechanical Engineering, B.S. in Computational Modeling & Data Analytics Blacksburg, VA
- Summa Cum Laude, Honors Laureate Diploma, President's List, 226 credit hours

EXPERIENCE

Georgia Institute of Technology Aug 2023 – Present
Graduate Teaching Assistant Atlanta, GA
- Supported faculty with curriculum development, grading, and instruction in Computing for Data Analytics and Machine Learning for Aerospace Engineering.

Cox Communications May 2024 – Aug 2024
Graduate Data Science Intern Atlanta, GA
- Leveraged techniques in NLP, Time-Series Analysis, and data mining with AWS (Sagemaker, Athena, SQL) to uncover novel insights into how outbound SMS notifications drive digital interactions.

NAVSEA Naval Surface Warfare Center Dahlgren Division Aug 2022 – May 2023
Optimal Shock Damping for Improved Controllability of Antenna Test Fixture Blacksburg, VA
- Technical lead in specialized team to design and manufacture 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 May 2022 – Aug 2022
Software Development and Data Analytics Intern 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 Aug 2021 – May 2022
Math Lecturer, Tutor Blacksburg, VA
- Earned highest paid undergraduate position at Virginia Tech through calculus lectures.
- Improved student grades by 20-30% on average and attended workshops to improve teaching.

PROJECTS

**Evaluating Linearized Echo State Networks, SINDy Framework, and Direct
Differentiation Methods for Dynamical System Modeling** Aug 2022 – May 2023
Advisor: Serkan Gugercin, Ph.D. 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.

Best Buy Project Week 2024 Competition Jan 2024
First Place Winner Atlanta, GA
- Leveraged techniques in data mining, dimensionality reduction, parallel computing, and visualization to develop a deep learning model that accurately categorized over 500,000 customer service transcripts.

Discovering Nonlinear Epidemiological Diff. Eq. Models from Data Aug 2023 – Dec 2023
CSE 8803 – Epidemiology Term Project, Instructor: B. Aaditya Prakash Atlanta, GA
- Accurately and reliably recovered governing differential equations from noisy, nonlinear epidemiological 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, AWS,
Languages: English (native), Spanish (fluent)