

Genova Mongalo

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RELEVANT COURSEWORK

- Deep Learning
- Reinforcement Learning
- Artificial Intelligence
- Machine Learning
- Algorithms & Complexity
- Data Structures

EDUCATION

University of Missouri-Kansas City(UMKC)

Bachelor of Science in Computer Science, summa cum laude

Kansas City, MO

Aug. 2021 – Dec 2024

Georgia Tech

Masters in Computer Science - Emphasis on Artificial Intelligence

Atlanta, GA

Aug 2025

EXPERIENCE

Federal AI\ML Engineer Contractor

May 2025 – August 2025

AFRL Sensors Directorate Internship Program, University of Dayton

Dayton, OH

- Pioneered the development of generative AI models enabling a CNN classifier to successfully recognize real objects when trained on generated data when utilized in transfer learning framework, addressing AFRL/DoD priorities.
- Using PyTorch, adapted state of the art classifiers to handle novel imaging modalities.
- Utilize slurm to enable large batches of parallelized computation.
- Created an innovative game theory approach to GAN training, significantly improving the results of the generator's development.
- Strategically organized and disseminated code and results through diverse channels of authority, fostering transparent communication and cross-functional alignment.
- Applied peer-reviewed research into practical solutions, ensuring evidence-based decisions in critical environments.
- The generative model's output led to an increase of 50 percentage points in the downstream classifier compared to the baseline.

AI\ML Engineer Intern

June 2024 – Dec 2024

NSF REU AI-Empowered Cybersecurity - University of Missouri, Kansas City

Kansas City, MO

- Engineered a robust Large Language Model to detect ransomware threats within Industrial Control Systems.
- Achieved 99/85% accuracy for binary/family classification scale respectively

NSF REU in Consumer Networking - University of Missouri, Columbia

May 2023 – July 2023

- Designed a model that detects/predicts cybersickness.
- Using a transformer machine learning model.
- Succeeded with an accuracy of 85% from a 1-10 cybersickness severity scale.

NASA Missouri Space Grant Consortium

Dec 2021 – April 2022

- Engineered an AI-driven simulation of space-bound transmissions as part of a NASA-funded initiative
Analyzing signal propagation and identifying optimal frequency bands under varying conditions.
- Developed an interactive interface to visualize transmission strength
- Provide adaptive frequency recommendations based on environmental parameters.

PRESENTATION / LEADERSHIP

Mongalo, G. (Dec. 2024). LLM Based Approach to Real Time Ransomware Detection for Industrial Control Systems. Presented at IEEE Big Data 2024, Washington, D.C. (Presenter & Author, solo work with mentor guidance).

- Led the design and implementation of secure communication protocols for global families platform, ensuring safe cross-cultural exchanges.
- Engaged in collaborative development through GitHub/Azure/, ensuring version control, code integrity, and efficient communication across a distributed team.

TECHNICAL SKILLS

Languages: Python, C / C++, Java / C#, SQL (Postgres), JavaScript, HTML/CSS, LISP

Frameworks: Machine Learning, React, Node.js, WireShark, FastAPI

Developer Tools: Git, VS Code, Visual Studio, PyCharm, Eclipse, Anaconda, Unity, Google Cloud Platform

Libraries: pandas, NumPy, Matplot, PyTorch, tkinter