FREDERICK JONES

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OBJECTIVE:

Machine Learning Engineer with Master's degree specializing in reinforcement learning and deep learning research. Recently presented research on naval applications of machine learning, demonstrating both technical expertise and effective communication skills.

EDUCATION:

Master of Science in Computer Science **December 2024**
Syracuse University
GPA: 3.600

Bachelor of Science in Computer Science **May 2023**
Syracuse University
GPA: 3.456

ACHIEVEMENTS:

- Graduated Cum Laude with Bachelor's Degree
- Graduated Magna Cum Laude with Master's Degree

WORK EXPERIENCE:

Research Assistant Saab, Inc. **May 2023 - February 2025**

- Conducting research in reinforcement learning regarding balancing radar resources between scanning and tracking in multi-target simulations
- Coordinate with a team of Professors and graduate students, weekly internal meetings about progress, bi-weekly external meetings with Saab Inc where results are reported
- Researching Deep Q Networks, supervised Deep Neural Networks, different network architectures, attention mechanisms, reward functions, and more
- Committed 2,000+ lines of code to the codebase, update existing code daily
- Leveraged reinforcement learning techniques to optimize radar resource allocation, research which was recently presented at the Naval Applications of Machine Learning Conference

Presentations & Conferences Naval Applications of Machine Learning **February 2025**

- Presented research at the Naval Applications of Machine Learning Conference on reinforcement learning techniques for optimizing radar resource allocation. February 24th, 2025

App Contributor - Sundial Syracuse, NY **September 2022 - December 2022**

- Developed a sun safety application in a team setting using Java and Android Studio
- Retrieves user location, displays UV Index, sunscreen recommendations, includes a time to burn feature for different skin types
- Maintained GitHub for version control; managed multiple branches and dealt with multiple fatal merge errors
- Completed the login/registration page using Firebase, UI, location services, and camera functionality

Technology Intern Duxbury, MA **June 2021 - July 2022**

- Installed new technology in student classrooms in grades K-12 (projectors, Apple TVs, microphones)
- Rewired IDF closets in the middle school and high school and installed new workstation phones in each classroom
- Conducted repairs on broken student Chromebooks; took out a ticket in JitBit, fixed the issue with corresponding Chromebooks, then closed the ticket and notified the student about the repair
- Lead a team of high school students and delegated tasks given to us from the CTO

Personal Projects - Data Science/Data Mining Syracuse, NY **September 2022 - Present**

- Implemented various data mining algorithms, including Twitter search and streaming data, basketball reference game, season, and player data
- Built an in season NBA prediction model for likelihoods of different teams winning the finals and different teams making the conference finals; correct 3/4 predicted conference finals (Celtics, Pacers, Mavericks) and correct about champion (Celtics)
- Wrote multiple genetic algorithms to solve multiple sequence alignment problems in the field of Bioinformatics
- Trained XGBoost and Neural network algorithms; run daily to predict outcomes of NBA games

SKILLS:

Python - Considerable experience with PyTorch, Tensorflow, Pandas, Keras, scikit-learn, NumPy, PyGad, and others
Machine Learning/Deep Learning (Python)
Linux
Data Mining
SQL and SQL Server
Android Studio
Embedded Systems
C and C++

COURSES:

- Relevant course work: Applied Natural Language Processing, Machine Learning, Artificial Intelligence, Data Science and Data Mining, Software Implementation, Software Specification and Design, Evolutionary Machine Learning, Bioinformatics, Internet of Things