Clark Saben

703-531-7034 | **clark@saben.org | Centreville, VA**

Relevant Links: LinkedIn | GitHub | Kaggle
Programming Languages: Python, Rust, Java, Bash, Solidity, HTML, CSS
Technologies: PyTorch, Tensorflow, Keras, scikit-learn, Numpy, Pandas, PyDicom, Git, Docker, Ray(Rllib), LaTex

EDUCATION

Mary Washington University **May 2024**

- BS Mathematics and Physics (GPA: 3.78)

Courses: OOP, Lin Alg, Differential Equations, Differential Geometry, Multivar Calc, Discrete Math, Computational Astrophysics, Classical Mechanics, Mathematical Methods of Physics, etc.

WORK EXPERIENCE

Serco **Remote**
ML SWE Part-time Aug 2023 - Current

Serco **Crystal City, VA**
Machine Learning Intern (Summer) May 2023 - Aug 2023

- Created reinforcement learning harness package for end-to-end training and monitoring of agents in Python (w/ Ray)
- Developed internal API for creating environments, training agents, and dueling agents/algorithms against each other
- Worked with Full-time Engineers on critical path simulator code in Rust

Machine Learning Intern (winter) | **Code** Dec 2022 - Jan 2023

- Engineered an ETL pipeline for dependency parsing using open-source libraries (HuggingFace, StanfordCoreNLP)
- Developed a training pipeline for transformer approach to dependency parsing

Dahlgren **Dahlgren, VA**
Machine Learning SWE Intern Jul 2022 - Nov 2022

- Created a data pipeline for weapon target assignment(WTA) with python using a network socket communicating with an in-house Unreal Engine Simulator.
- Developed an LSTM model with keras to function as an agent to beat the simulator
- Enabled team to generate statistics regarding computational efficacy of a heuristic approach for WTA v.s. Deep Learning

Serco **Herndon, VA**
Data Science Intern May 2022 - Jul 2022

- Built an ETA pipeline for generating annual comptroller data with python
- Functioned as an intermediary of NLP Engineers and Business Analysts on development of an entity extraction tool

Independent Research **Virtual**
Applied ML to Neuroscience with Dr. Tirthabir Biswas Mar 2022 - Present

- Implemented cvxpy linear solvers to generate identical results as unregulated dense neural network (Wmin theory)
- Built a research pipeline for iterating training of ML models to use produced weight matrices as constraint conditions

PROJECTS

Radiology AI Assistant (Radapp) | **Github Code** | (Keras, Tensorflow, Docker, Git) **2022**

- Built and Deployed model to docker for identifying brain tumor presence with 88% accuracy
- Collected and Visualized Cancer Imaging Archive Glioma Dataset
- Wrote white paper and Organized a team of 5 members; created slack, discord, team meetings

Automated Note Server (Joplin-Auto) | **Github Code** | **2023**

- Built interface from Joplin python API for automated note formatting and generation
- Automatically updates daily and sends emails to user with statistics on todo list progress

CODING COMPETITIONS

- 5th Place at Dahlgren $100,000 Prize Innovation AI/ML Hackathon | Github Code | 2023
- 2nd Place at University of Mary Washington Hackathon | Github Code | 2021

PUBLICATIONS

- Co-authored undergraduate research paper, “Brain Imaging for Autism Diagnosis” (Article)