Clark Saben

clark@saben.org | 703-531-7034 | Centreville, Virginia | GitHub | Kaggle

EDUCATION AND HONORS

Chantilly Highschool   June 2020
- GPA: 3.98
- Track Captain

University of Mary Washington   Fredericksburg, VA
Pursuing Bachelors in Science with Physics   May 2024
- Cumulative GPA: 4.0/4.0, President's List
- Presidential Award

         2020, 2021

RESEARCH EXPERIENCE

Biomedical Imaging Research   Fredericksburg, VA
Undergraduate Researcher, Co-Author   Jan 2021 – June 2021
- Utilized Rhino 3D software to generate NERB polygon meshes
- Publication: Makkia R, Brindle S, Saben C, Brain Imaging for Autism Diagnosis, ref: https://physics.aps.org/articles/v14/44 Mar 22, 2021

Undergraduate Biology Research   Fredericksburg, VA
Undergraduate Researcher   August 2020 – January 2021
- Developed and iterated upon prior procedures for imaging the ultrastructure of Chritidia
- Provided group instruction to fellow researchers on equipment usage

SKILLS

- **Programming Languages:** Python, Basics of Solidity, Basics of C, HTML, CSS
- **Machine Learning:** Python (eg. scikit-learn, numpy, pandas, PyDicom, TensorFlow)
- **Data Science & Miscellaneous:** Data science pipeline (preprocessing, visualization, modeling), Experimental design, APIs, Excel, Git, operation of Hitachi S-3400N SEM (electron microscope)

PROJECTS AND LEADERSHIP

2nd Place UMW Hackathon Placement
24hr school-wide coding competition   March 2021 – March 2021
- Developed a machine learning model for classification of eagles (school mascot) that achieved 91% accuracy
- Developed multi classification model for tumor, necrosis, and control brain images (nominal accuracy)
- Utilized Python to web scrape images for classification tasks, stored test data appropriately

[Ongoing] Chain Link Sponsored Hackathon Project: Radiology Application (RadApp)
Blockchain and Machine Learning Development   October 2021 – November 2021
- Developed white paper of RadApp v.0 (GitHub repo)
- Collected and Visualized Cancer Imaging Archive Glioma Dataset
- Developed original concept & Conducted outreach for team recruiting
- Organized a team of 5 members; created slack, discord, team meetings
- Built and Deployed model to docker for inference

Top 35% placement in Kaggle RSNA Brain Tumor Classification Task
Kaggle Expert: Profile   August 2021 - October 2021
- Developed preprocessing pipeline for dicom files utilizing Pydicom and native python libraries
- Visualized animations of segmentation series using Matplotlib
- Trained on a 2dConvolutional Neural Network and performed bagging to develop best local model (0.78 a.u.c)
- Organized Discord Server for team member communications

Eagle Scout   Centreville, VA
Patrol Leader   Jan 2015 - Aug 2020
- Led patrol of 7+ individuals in camping activities