ZAIN SAMIR JERATH

Zainjerath2024@u.northwestern.edu ◆ (202) 480-6263 ◆ Linkedin ◆ Github

EDUCATION

NORTHWESTERN UNIVERSITY **Evanston, IL**
B.S. in Computer Science, Minor in Data Science June 2024

- GPA: 3.6, Dean's List Spring 2022
- Relevant Coursework: Data Structures and Algorithms, Programming Languages, Design and Analysis of Algorithms, Introduction to Database Systems, Human Computer Interaction, Machine Learning

WORK EXPERIENCE

NASA **Lanham, MD**
Software Engineer Intern July-Sep 2022

- Supported the Global Modeling and Assimilation Office in the optimization and maintenance of Goddard Earth Observing System (GEOS) software infrastructure
- Built images using Docker and Singularity to package and containerize the build and run use cases of the NASA GEOS model
- Developed containerized models to run on both M1 MacBooks and the NCCS Discover Cluster
- Successfully optimized speed of isolated build and run in user spaces by 20%

NASA **Lanham, MD**
Summer Intern June-Sep 2021

- Worked with NASA OMPS team to improve satellite data collection and interpretation
- Wrote python scripts that modeled NASA OMPS Limb Profiler data alongside Nadir Mapper data in order to detect UV-absorbing aerosols
- Estimated vertical distribution of Saharan dust by retrieving aerosol profiles of events with elevated UV Color Index measurements
- Improved Limb Profiler data collection from 2-dimensional to 3-dimensional by combining tropospheric aerosol profiles with latitudinal and longitudinal aerosol detection

NASA **Lanham, MD**
Summer Intern July - Sep 2019

- Visualized Ozone Mapping and Profiler Suite (OMPS) measurements over Sahara Desert using python and matplotlib in order to detect tropospheric aerosol
- Improved cloud detection and determination techniques by modeling OMPS radiance data at wavelengths less than 1 micron

PROJECTS

Personal Website November 2022-Current

- Created portfolio website using HTML, CSS, and JavaScript
- Utilized UI/UX design principles to optimize and simplify user experience

MusicPlayer October 2022

- Developed an Apple Music/Spotify clone that allows users to store their favorite albums and songs
- Built player functionality to display volume level and time elapsed using JavaScript

Galaga December 2021

- Utilized object-oriented programming to create new version of Galaga with C++
- Implemented classes for unique sprites, created new layout and score incrementation

SKILLS AND INTERESTS

Technical: C/C++, Python, JavaScript, HTML/CSS, Racket, Matplotlib, Docker, Singularity, Bash, Microsoft Office
Interests: AI, Art, Big Data, Effective Altruism, Environmental Research, Graphic Design, Web Development