Tiancheng Shao

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571-789-5324
Potomac, MD

Experience:

Intern

CISESS at University of Maryland • College Park, Maryland

06/2023 - 08/2023

During this internship, we set out to track an iceberg, A-76A, the largest piece to calve from the Antarctic ice shelf at the time. U-NET, a Convolutional Neural Network, was used to differentiate it from cloud cover. Results were then interpreted and presented at the 104th Annual AMS meeting at Baltimore, Maryland.

Intern

University of Maryland • College Park, Maryland

06/2022 - 09/2022

I worked with Dr. Surja Sharma and used Long-Short-Term-Memory (LSTM) machine learning modeling on solar wind data, incorporating multiple variables to predict the effect that they had on the geomagnetic ring current around the equator monitored by Disturbance Storm-Time (Dst) Indices. This was done using data from publicly available DST readings and satellite data (NASA OMNIWeb).

Intern

NASA Goddard • Greenbelt, Maryland

06/2024 - 09/2024

I worked with Dr. Mei-ching Fok, at the Goddard Space Flight Center in Greenbelt, Maryland. Python was used to compare DST indices and WIND satellite data with particle flux data from SEDA-SDOM, and later CHD aboard the International Space Station. By modeling how deeply the particles penetrated in the ionosphere, the severity of storms and their effect on the magnetosphere were described. An abstract was accepted for the AGU meeting in Annapolis, Maryland, focussing on the effects of the May 10th solar storm.

Skills

Python for Data Science, Java, C++, Bash, HTML, CSS, JS, UNIX, PowerShell, Microsoft Excel, Bilingual, English

Education

STEM Magnet Program

Montgomery Blair High School • Silver Spring, Maryland

06/2025

4.98 Weighted GPA, 3.98 Unweighted, 1580 SAT

Awards:

AIME Qualifier, USACO Silver, UMD II Qualifier, MTFC Semi-finalist, 3rd Place at the National Geographic Physics Competition at HOSA International Leadership Conference, 9th Place at the National Geographic Organic Chemistry Competition at HOSA ILC, International Finalist for Accounting Applications at DECA ICDC, Exploravision Semifinalist, Non-Trivial Fellowship Finalist