JOSH ORTNER

jlortner@gmail.com
joshortner.github.io
(270)-227-9769

Profile

Computer Science graduate with a year of AI/Data Science research experience. I'm passionate about Computer Graphics, Web Development and Machine Learning. Check out my website for more info on my personal projects: joshortner.github.io.

Education

Middle Tennessee State University - Murfreesboro, TN
B.S. Computer Science - 3.5 GPA

Skills

Languages

C/C++, Python, Go, JavaScript, HTML/CSS, C#, x86 Assembly, Java

Software

Git, Visual Studio, GNU Compiler Tools, NPM, Pip, CMake, OpenGL/CV/CL, ReactJS, Tensorflow, Keras

Methods

OOP, DRY, MVC, Event Driven Architecture, Parallel/Asynchronous Programming, Relational Databases, NoSQL, ECS

Experience

Los Alamos National Lab

August 2021 - Decemeber 2021

Research Intern
Space Data Science and Systems Division

- Designed algorithms to model the spectral patterns of military action in satellite imagery
- Wrote Python modules to implement existing and novel image analysis algorithms
- Utilized GitHub for version control and collaboration
- Used Google's Earth Engine API (Python and JavaScript) to gather geospatial data
- Generated customized data products using Python image processing libraries
- Presented my work in an oral presentation to a group of fellow interns and Scientists
- Produced a research paper documenting the project and it's results

Oak Ridge National Lab

January 2021 - April 2021

Research Intern
Computational Science and Engineering Division

- Worked with a Research Scientist to define the goals and scope of a semester long project
- Designed and implemented a custom data processing pipeline that:
    - Integrated large image datasets from multiple sources
    - Preformed uniform preprocessing to prepare the data for model ingestion
- Developed Python modules for Machine Learning analysis using Keras and Tensorflow
- Implemented a full-stack proof of concept web-based image analysis application using:
    - Python's Flask library
    - The Jinja html template engine
    - JavaScript/HTML/CSS
- Developed a custom caching system to speed up queries made on the POC application
- Produced a paper documenting my research and its context within related literature
- Presented a poster and software demo to a group of Research Scientists and interns
- Project details: https://github.com/joshortner/ORNL-SULI-AI4HDR