

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: [joshortner.github.io](https://joshortner.github.io).

Education

Middle Tennessee State University - Murfreesboro, TN

B.S. Computer Science - 3.45 GPA

Skills	Languages	Software	Methods
	C/C++, Python, Go, JavaScript, HTML/CSS, C#, x86 Assembly, Java	Git, Visual Studio, GNU Compiler Tools, CMake, OpenGL, OpenCL, CUDA, OpenCV, Earth Engine, ReactJS	OOP, DRY, MVC, Event Driven Architecture, Parallel/Asynchronous Programming, Relational Databases

- Experience

Los Alamos National Lab

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 Python and JavaScript API's 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

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
  - 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>

August 2021 - Decemeber 2021

January 2021 - April 2021