



OVERWATCH IMAGING

JOB DESCRIPTION FOR HIRE

Title: Geospatial Data Software Engineer

Position Description: The Overwatch Imaging Geospatial Data Software Engineer will design and implement connections between imagery captured by our products and outside map data. This Engineer will support image manipulation and image data management software to enable customers to easily and automatically consume our intelligence outputs.

Company Description: Overwatch Imaging is changing the way airborne image-based intelligence is created. Rooted in the airborne intelligence technology cluster of Hood River, Oregon, Overwatch Imaging is revolutionizing human understanding of the world through computer vision-optimized sensing. Overwatch makes customized imaging payloads designed for mission-critical, automated remote sensing roles. Our products allow mid-sized UAS and general aviation aircraft to collect precision survey maps, conduct autonomous search and detection, and provide real-time image-based intelligence to users. Overwatch payloads feature actively stabilized multi-band cameras combined with onboard image processing and AI software, which we leverage to reduce operator workload, identify hard-to-find small signals in large datasets, and accelerate data transformation into knowledge.

Major Areas of Responsibility: *The ideal candidate will be strong in many of the following areas:*

- **Geospatial Imagery Optimization:** Creates software to geolocate, rectify, mosaic, register and otherwise combine imagery with map data. Implements cloud-based web map service approaches to simplify user consumption of big sets of image data.
- **Object Detection Algorithm Development:** Identifies techniques and creates software to detect and characterize hard-to-find signals from a variety of imagery situations.
- **Image Processing Software Programming:** Supports development of image manipulation and data management software for deployment in Overwatch airborne payloads or ground stations, to accelerate data extraction and simplify post-processing workflows.



Required Knowledge, Skills and Abilities:

- ***Experience and Education:***
 - Formal education and training in computer science, aeronautical engineering, robotics, optics, or related fields.
 - Experience in airborne or space-based remote sensing and image processing; hands-on experience with high resolution multispectral band imagery preferred.
 - Academic or professional experience with image processing software, machine learning techniques, and autonomous systems.
 - Experience with device driver implementation and embedded system deployment; experience working in a compute-constrained environment.
 - 8+ years of experience with a Bachelor's degree, or
 - 5+ years of experience with a Master's degree, or
 - 2+ years of experience with a Ph.D degree.
- ***Technical Competence:***
 - Programming in C, C++, Python, CUDA, OpenCV, MATLAB, and Java
 - Web Map Service and Geospatial Database Development
 - Image-Based Object Detection and Classification
 - Machine Learning Model Training and Refinement
 - Imagery Manipulation, Compression and Formatting
 - Linux Operating System on GPU-Accelerated Hardware
 - Photography and Video Imagery Collection
- ***Character Attributes:***
 - Thrives in a dynamic, fast-paced startup business work environment.
 - Highly motivated self-starter able to work independently.
 - Collaborates well in a small team environment.
 - Enjoys hands-on work and learning new skills.
 - Eager to solve real-world problems and see work product reach the field.

Location: This position is based in Hood River, Oregon, and requires occasional travel. All applicants must be authorized to work on a permanent basis in the United States.