



JOB DESCRIPTION FOR HIRE

Title: Computer Vision Software Engineer

Position Description: The Overwatch Computer Vision Software Engineer will design and implement computer vision and applied artificial intelligence software for real-time, onboard image processing to transform raw aerial image data into customer intelligence.

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:*

- **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 camera controls and image manipulation programs for deployment in Overwatch airborne payloads or ground stations, to accelerate data extraction and simplify post-processing workflows.
- **Representative Imagery Collection:** Gathers image data from aircraft, manned or unmanned, to develop and test object detection software.



Required Knowledge, Skills and Abilities:

- ***Experience and Education:***
 - Formal education and training in computer science, aeronautical engineering, electrical or mechanical engineering, 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.
 - 5+ years of experience with a Bachelor's degree, or
 - 2+ years of experience with a Master's or Ph.D degree.
- ***Technical Competence:***
 - Programming in C, C++, Python, CUDA, OpenCV, MATLAB, and Java
 - 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.