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Position Software Developer – drone phenotyping

Location Sunnyvale, CA

About Blue River

Blue River Technology serves the agricultural industry with revolutionary computer-vision based robotics designed to unlock greater crop yield potential. Our proprietary systems perform a range of tasks, from making real-time plant thinning to processing huge amounts of plant image data to generate useful metrics for plant breeders. We envision a future where farmers use robotics to individually care for each plant in their fields. We have begun by targeting vegetable crops grown in California, and have been recently expanding our work to include a wider range of crops and geographies. Our team of 45 comes from diverse backgrounds in robotics, computer vision, agriculture, and business. We receive support and investment from venture capital firms, including Khosla Ventures and Data Collective.

Position description

We are looking for a highly skilled, energetic software developer to develop image processing pipelines to extract plant traits from aerial imagery, collected over agricultural fields by a multirotor drone. The purpose of the project is to measure plant traits of corn, sorghum, and other crops to aid plant breeding (i.e. phenotyping). The primary role of this position is to implement code which processes images from multispectral and thermal cameras and generates maps containing attributes of the plants. Tasks include georeferencing and image registration, transformation from raw pixel values to physical units (e.g. °C, reflectance), data extraction within regions of interest, and feature extraction.

Requirements

- Bachelor's degree in Computer Science or related areas
- Fluency and strong skills in C++ and/or Python, experience in OOP
- Programming experience with 2D image processing algorithms (e.g. IDL, C++, Matlab)
- GIS and experience manipulating georeferenced imagery in IDL, C++, Matlab, R or similar
- Excellent communication and teamwork skills

In addition, the following are a plus:

- Experience using GIS visualizers, such as ArcGIS, QGIS, etc.
- LiDAR processing (e.g. LAStools)
- Remote sensing image processing (e.g. ENVI)
- Statistical modeling in R, including linear regression and machine learning algorithms
- Fluency with other programming and scripting languages, preferably Python and Matlab
- Advanced degree in CS or related technical areas; senior candidates are encouraged to apply

Interested?

Please send your resume to careers@bluerivert.com with "Software Developer- drone phenotyping" in the subject line and a brief explanation of why your interests and background match this position in the message.