

Project 18/44: Machine Learning for Camera Systems

Company: Archangel Imaging

Supervisor: Jonathan Mist

Location: Harwell, Oxfordshire

Company Description:

Archangel Imaging is a start-up developing distributed intelligence and advanced unmanned camera systems. We have worked on world record projects and was selected as the winner of BT Infinity Award in 2018. Our development of unique machine vision payloads including a multi-spectral imagers were featured at Dubai's Robotics for Good award in Feb 2017 and at Innovate 2017 exhibition.

Our mission is to help organisations to easily gain and manage machine vision capability on edge devices deployed in remote areas, such as in automated search and rescue operations, sea crime monitoring and environmental protection missions. Our products combine cutting-edge machine learning with specialist cameras, advanced communication terminals and different levels of swarm intelligence to meet this challenge.

Project Description:

The successful candidate will be involved in enhancing the machine learning algorithms for the company's existing products. The products combine machine learning with specialist cameras and different levels of swarm intelligence. The intern will be responsible for a variety of different aspects related to the products; including but not limited to imagery collection, training neural nets, testing/deploying systems and designing/implementing single shot detection systems.

The internship framework is flexible therefore the intern will have opportunities to gain a range of skills relating to the development and design of machine vision algorithms.

Applicant Specification:

The project requires hands on involvement from an exceptional candidate with a strong interest in machine learning and developing machine vision algorithms. The ideal candidate will be a proactive individual with necessary technical abilities and desire to work with AI.

Minimum Requirements:

The applicants should have at least an upper second-class degree (obtained or predicted) in a computer science related discipline with experience in working within a team on a project with deliverables. It is essential that the candidate can take ownership of tasks given to deliver them within the required timeframe. It is essential that the candidate can make meaningful contributions, take ownership of assigned tasks and deliver them within the required timeframe.

The successful applicant must have some knowledge/experience in the following:

- Machine learning
- Able to code in: C or Python
- Able to use a Linux operating system; and

At least one of the following:

- OpenCV
- Tensorflow

Preferred Additional Requirements:

Evidence of knowledge/experience in working the following areas would be advantageous but not essential:

- Machine learning libraries and machine vision models
- C++, GPU programming (CUDA)
- Multispectral and/or hyperspectral camera systems
- Depth camera systems and/or stereo vision.

Further details:

8 weeks minimum fixed term contract to be agreed with successful candidate but nominally with a start date around 18 June 2018, when the SPIN Induction Day will be held at the Satellite Applications Catapult, Harwell. Salary is £1,500 per calendar month.

Closing Date for Applications: 17:00, Friday 8 June, 2018

Applications should be made through the online form attaching a CV, before the closing date. Please note that elements of the form left incomplete will be deemed to render the application ineligible. They will be checked for eligibility and forwarded to the employer.

Apply here: <https://sa.catapult.org.uk/people/space-placements-industry-spin/>