1 Advertisement

Post Title: Sensors, AI & Computer Vision Specialist (KTP Associate)
School/department: School of Engineering and Informatics, Engineering department
Hours: Full time hours of 37.5 per week
Requests for underlineflexible working options will be considered (subject to business need).
Contract: fixed term for 19 months
Reference: 7389
Salary: starting at £34,304 to £44,706 per annum, pro rata if part time
Placed on: 30 March 2022.
Closing date: 10 May 2022   . Applications must be received by midnight of the closing date.
Expected start date: As soon as possible

This advert was recently posted on 18 January 2022 – Previous Applicants need not apply.

Looking for an exciting new career in sensor technology, AI and computer vision?

The University of Sussex has teamed up with world leading specialists in entrance security, Gunnebo Entrance Control Ltd, to offer this Sensors, AI & Computer Vision Specialist position based in their office at Maresfield, East Sussex.

Gunnebo Entrance Control is the world's leading supplier of smart security gates. These gates are used in underground stations, offices and airports. They are used to provide security and safety to commuters, office workers and others.

This project will use recent developments in AI and computer vision to improve the operation of the gates, for example the tracking of a person could be used to improve the speed of operation. Multi-modal sensor fusion can be used to improve the accuracy of gates and detect cheating such as tailgating.

To do this, the successful candidate will investigate new sensor modalities and AI techniques, such as, deep learning computer vision and data fusion methods. These will be then integrated on an embedded platform. The project will involve a full cycle of building a machine learning product. This will be from the data capture design, model design and training, to the evaluation and final real-time implementation on hardware. Having hands on python and AI related libraries such as TensorFlow, Keras or Pytorch and general scientific computing and visualization libraries such as numpy, scipy, pandas, matplotlib, OpenCV is crucial. Data manipulation, preprocessing and preparation of data for ML training using python libraries is an important part of this project. At the end of this project, you will get a fantastic commercial experience in the domain of AI and deep learning. The candidate will also be exposed to the business development of the product.

This 19-month project is funded through a Knowledge Transfer Partnership (KTP) award, a UK Government scheme intended to promote beneficial relationships between universities and industry. The role offers a £33k-£44k pa salary and in addition, as a KTP Associate you will receive extensive practical and formal training, gain marketable skills, broaden knowledge and expertise within an industrially relevant project, and be supported by both industrial and academic mentors. The KTP associate will benefit from a tax free Personal

Development Budget of £4,667. Academic publications will be produced and there is the likelihood of a permanent position at Gunnebo at the end of the contract.

If you're a talented individual with experience in sensor technology, AI and machine learning looking for a new challenge and to take control of your own project, then make sure you take advantage of this rare opportunity.

Please contact Dr Phil Birch, p.m.birch@sussex.ac.uk for informal enquiries.

For full details and how to apply see our vacancies page

2.   The School / Division

Please find further information regarding the school/division at
http://www.sussex.ac.uk/engineering/research

3.   Job Description

Job Description for the post of: Sensor Technology Specialist (KTP Associate)

Department:	Department of Engineering
Section/Unit/School:	School of Engineering and Informatics
Location:	**Based at Gunnebo Entrance Control Ltd Headquarters, Maresfield, East Sussex**
Grade:	7
Responsible to:	Iain Port (Company Supervisor) & Dr Phil Birch (Academic Supervisor)
Responsible for:	NA

- **Job description and overview**
  Gunnebo Entrance Control Ltd and the University of Sussex are looking to recruit a dynamic and highly skilled, qualified graduate with in the area of Sensor technology, AI and Machine Learning to lead and deliver a project analysing, selecting and developing an AI-based multimodal camera sensing solution that will disrupt people detection within entrance control systems. Specifically, knowledge and expertise in computer vision, machine learning, AI and their applications to multi-modal sensing devices (cameras, depth sensors, etc.) is sought to work alongside a multi-disciplinary team of R&D engineers at Gunnebo, leading designer and manufacturer of physical access control gates globally.

This position forms part of the Knowledge Transfer Partnership (KTP) programme co-funded by a grant through Innovate UK. It is essential that the post holder understands how KTP works with business and the University, and the vital role you will play if you successfully secure this position. KTPs offer a wide range of benefits including access to a £4,667 Personal Development budget to upskill during the project.

Main accountabilities and responsibility areas

Accountabilities

1. To lead on and deliver successful project outcomes in collaboration with University of Sussex and Gunnebo Entrance Controls throughout the whole product lifecycle

2. To provide regular reports and presentations to Gunnebo and University senior management team members updating them on project progress

3. To evaluate and review technologies used and recommend changes to the project plan as necessary determined by research findings

Responsibilities

1. Project management
   1.1 To lead and deliver agreed project outcomes
   1.2 To provide regular project updates and recommendations to senior Company and University members of Knowledge Transfer Partnership at regular monthly meetings
   1.3 To provide written reports on project progress and technology developments

2. Research and development
   2.1 To lead on the development of the product throughout the whole product lifecycle engaging with marketing, comms and manufacturing teams as and when necessary
   2.2 Develop research objectives and proposals with senior Gunnebo and University colleagues
   2.3 Conduct research individually and in collaboration with others
   2.4 Analyse and interpret research findings and draw conclusions on the outcomes
   2.5 Participate in internal networks and relevant external networks in order to share learning with peers and project board members
   2.6 Continually update knowledge and understanding in field and engage in continuous professional development opportunities offered in Company, through activities offered at University of Sussex Sensor Technology Group and through the KTP programme

3. Collaborative working with KTP partners
   3.1 Attend and deliver presentations on project progress at regular KTP meetings

3.2 The role holder will liaise regularly with senior management team members across multiple sites and will be expected to attend conferences to network with businesses to update knowledge and skills
3.3 Understand how the KTP process works to support Business and University partners and outputs

Decision Making and Problem Solving

The role holder will be project lead, managing their own workload and ensuring outputs are delivered on time. Creative thinking and decision making will be required to explore all possible technical solutions and determine changes to those used, adjusting, developing and reporting on the project plan accordingly. The role holder will direct problem-solving activities and their own learning with the support of in-company and University supervisors. The role will recommend and agree project changes with the Local Management Committee (LMC) members according to research findings. They will advise on any changes or impacts to manufacturing processes that may be required as a result of developing the new products during the project.

Major Deliverables

To understand how the KTP process supports and delivers outcomes for both the University and business partners

To deliver project outputs as determined by the agreed KTP project plan To report on project progress and recommend changes in response to research findings

To bring products to market in liaison with Gunnebo sales and marketing team and with the support of Company and University supervisors

To work collaboratively with all KTP partners and teams across the global Gunnebo company to achieve successful project outcomes.

To act as a conduit for knowledge exchange proactively sharing research findings and providing expert support to colleagues within the company, agreed networks and through regular attendance at research group meetings at University.

To share learning with Gunnebo colleagues and team and the academic and student community supporting a better understanding of the technologies amongst appropriate networks

To work collaboratively with all KTP partners and teams across the global Gunnebo company to achieve successful project outcomes.

Liaison with a range of different stakeholders at different levels of seniority and with different degrees of technical knowledge. Including leading on presentation of project updates to company director and senior academics on a regular basis at LMC meetings; sharing knowledge and learning with

academics and students at research group meetings; translating research findings and product capabilities to non-technical company employees in the sales and marketing team as part of product handover and launch

4.   Person Specification

The following qualifications, knowledge, experience, skills and competencies are required:

ESSENTIAL CRITERIA
Qualifications and professional accreditations:
BSc/BEng or MSc/Meng in Computer Science or related area
Skills and competencies:
- Skills in computer vision   - Ability to Programme in Python   - Skills in AI, machine learning and data science   - Excellent written and verbal communication skills including delivering presentations to corporate senior management team and to academic research group also ability to write and deliver technical reports
Knowledge areas:
- Developing algorithms and software   - Project management   - Understand how the knowledge transfer partnership process works to support the University and Business
Previous experience:
Experience of programming in python is necessary for this role as is experience of working with computer vision, AI and ML including previous experience developing algorithms and software
PREFERRED CRITERIA
Qualifications and professional accreditations:
PhD in Deep learning, computer vision or a related area
Skills and competencies:
Programming skills in Matlab and C++
Knowledge areas:
- Multi-modal sensor fusion   - Data capture