Job Description

Job Title: **Research Assistant in Robotics**
Job Ref: **SCT292**
Campus: **Hendon**
Grade: **Grade 6**
Salary: **£32,407 per annum including Outer London Weighting**
Period: **9 months (February-October 2021)**
Reporting To: **Eris Chinellato**
Reporting to
Job Holder: **None**

Role Summary

The role will be held by a postgraduate or post-doctoral researcher.
Successful applicants will hold at least MSc or MEng in Robotics Engineering, Artificial Intelligence, or equivalent. Post-doctoral candidates with a PhD in a relevant discipline will be favoured.

Job Purpose

To contribute to the successful development of the project "DeepEco - Transforming recycling of waste plastics in recycling facilities using innovative computer vision with novel AI software and incorporated robotics", funded by an InnovateUK Smart Grant for year 2021.

The candidate will work on research activities and project support to senior researchers, to enable the delivery of the intended results, to the benefit of the School, the University and the wider community.

Main responsibilities

Project specific

- Program a robot system to integrate vision and object handling into a unified framework. Use visual information to establish object location and pose and decide the most appropriate robot movements for grasping.

- Test deep learning algorithms for visual recognition developed by project partners on the local facilities at Middlesex University.

- Test and choose the most appropriate end effector(s) and robot arm according to task priorities.

- Optionally integrate touch sensors into the framework, for grasping feedback and for introducing an additional way of recognising / self-labelling target objects.

Research and knowledge transfer

- Individually or with others, contribute to the research project using both quantitative and qualitative research methodologies.

- To undertake literature reviews and contribute to the production of research reports, conference papers, and peer-reviewed journals where appropriate.

- To liaise with project and programme partners internally and externally to support the delivery of the research project and/or programme.

- Continually update own knowledge in the field of specialism.

Administration
- Support the Lead Researcher with the coordination of research activity, as agreed.

- Provide administrative support to the project to include but not limited to note taking, organisation of events and dissemination of information to stakeholders.

Learning and Teaching
- Assist in the supervision of student projects.

- Contribute to teaching through demonstration of equipment and explanation of research methods and equipment.

- Undertake other activities, as required.

PERSON SPECIFICATION

Post Title: **Research Assistant in Robotics**

Essential requirements

Knowledge, Skills and Experience
Essential
- MEng/MSc in Robotics Engineering or similar (e.g. AI, Mechatronics, Automation).
- Evidence of work supporting progress within an academic or industrial environment.
- Proven knowledge and skills in robotics programming and control (e.g. Python, C++, Java).

Desirable
- Proven knowledge and skills in Machine Learning.
- Proven knowledge and skills in Computer Vision.
- Ability to communicate effectively within a team and externally, in writing and orally
- Ability to work independently and as part of a team

Hours: 35.5 hours per week, actual daily hours by arrangement

Leave: 35 days per annum plus eight Bank Holidays and seven University days taken at Christmas (pro rata for part-time staff) which may need to be taken as time off in lieu.

Flexibility: Please note that given the need for flexibility in order to meet the changing requirements of the University, the duties and location of this post and the role of the post-holder may be changed after consultation. The balance of duties may vary over time and will be reviewed as part of the appraisal process.