Job Description

Job Title: **Research Fellow in Machine Learning**
Job Ref: **SCT220**
Campus: **Hendon, London, UK**
Grade: **Grade 7**
Salary: **£36,794 - £42,266 p.a. inclusive Olw**
Period: **Fixed Term until End December 2019**
Reporting To: **Associate Professor**

Role Summary

The Project

We are seeking a Research Fellow in Machine Learning to apply deep learning algorithms to cognitive driver assistance systems in relation to the H2020 DREAMS4CARS project.

DREAMS4CARS is a 7-partner, 36 month, European Union H2020-funded project with the goal of enabling autonomous vehicles to cope with arbitrary and open-ended circumstances. The project takes inspiration from the Simulation Hypothesis of Cognition – the notion that thoughts are chains of simulated actions and perceptions. Dreams4Cars will thus build an offline 'dream simulation' mechanism which, by recombining aspects of real-world experience, is able produce novel states capable of improving sensorimotor systems and emulating rare events.

The post holder will help develop the high-level reasoning and dream simulation aspects of the project, involving deep learning and potentially also stochastic logic based approaches.

Job Purpose

- To research and develop advanced machine learning techniques relevant to the project goals and to evaluate these on both project & reference data sets.
- To lead and manage relevant work packages in support of Project DREAMS4CARS, ensuring appropriate interfacing with partners.

Main Responsibilities:

- To lead a Work Package and to work with those of research partners; to carry out individual and collaborative research relevant to the project
- To contribute to the development of software according to project specifications
- To produce research reports and deliverables related to the project
- To take lead in preparing conference and journal articles for high quality peer-reviewed publication
- To undertake work package leadership and general administrative tasks to ensure the smooth running of the project
- To coordinate with research partners and stakeholders related to the project with immediate responsibility for the work package
- To assist in limited teaching and student project supervision as agreed by line manager.
- To assist in any other task defined by the line manager as appropriate to the post and grade.

Hours: 35.5 hours per week, 52 weeks per annum, actual daily hours by arrangement.

Leave: 35 days per annum plus eight Bank Holidays and seven University days taken at Christmas. All leave should be agreed in advance with the line manager.

Flexibility: Please note that, given the need for flexibility in order to meet the changing requirements, the duties/location of this post and the role of the post-holder may be changed after consultation.

Qualifications, Experience, Knowledge and Skills

As Researcher

- A PhD in a relevant discipline (e.g., computer science, mathematics, physics).
- Track record or researching, developing and/or applying machine learning algorithms (preference will be given to candidates with a research track record in *deep learning* or *stochastic logic methods,* and to candidates with a strong track record of original development in any area of machine learning*).*
- An excellent publication record in top-quality journals/conferences.
- Ability to code developed algorithms in MATLAB/Python or similar.
- Experience in using initiative and creativity for research, problem solving, data analysis, and conclusion formulation.
- Able to carry-out project tasks, write project reports under time pressure & perform collaborative activities among project partners, communicating with co-workers, consortium partners and end-users.

No Parking at Hendon campus: There are no parking facilities for new staff joining our Hendon campus, except for Blue Badge holders. If you are applying for a post at our Hendon Campus please ensure you can commute without using a car.

Information on public transport to Hendon can be found here:
http://www.mdx.ac.uk/campus/campuses/docs/Hendon_campus_map.pdf

We offer an interest-free season ticket loan, interest-free motorbike loan, and bicycle and motorbike parking and changing facilities.

Flexible working applications (including part-time working) will be considered.

The postholder should actively follow Middlesex University policies and procedures and maintain an awareness and observation of Fire and Health & Safety Regulations.

What Happens Next ?

If you wish to discuss the job in further detail please contact Dr David Windridge d.windridge@mdx.ac.uk.