Job Description

Research Associate – Deep Learning and Computer Vision (KTP Associate)

Salary: £43,000 to £55,000
Contract: For a fixed term period of two years and full time
School/Department: School of Computer
Location: NicheCom, Wokingham, RG41 2FD
Responsible to: Knowledge Base Team, University of Kent; Business Supervisor, NicheCom

Job purpose

The role will require research and software development skills with knowledge of deep neural networks and computer vision. You must have a problem-solving approach to meeting the overall project deliverables and will be expected to devise work leading to the creation of a working software implementation.

The work will be conducted in collaboration with two academic supervisors and the employees of NicheCom, so it is important to be able to work well as part of a team. Online communication media (such as Teams) will be used throughout the project.

Working with stakeholders at NicheCom, the role holder will be tasked with developing machine learning models, utilising deep learning to automate the image editing tasks. NicheCom have a large portfolio of image editing content, and the data will facilitate the application of advanced AI methods.

Key accountabilities

- Meet the objectives of the relevant project work packages according to the direction of the supervisors.
- To support the research of other team members under the direction of the supervisors.
- To contribute internal research progress meetings with other supervisors and NicheCom employees.
- To read literature and share appropriate articles with the team. Regular literature reviews should be undertaken, and the state-of-the-art software tools investigated.
- To transfer the knowledge and experience gained throughout the KTP project to NicheCom.

Key duties

The following are the main duties for the job. Other duties, commensurate with the grading of the job, may also be assigned from time to time.

- To undertake autonomous research, according to the direction of the supervisors, where image processing tools will be created.
- To conduct a literature review of the relevant computer vision algorithms.
- To create a technical design for the proposed system, considering how the different components can be linked together and the likelihood that the components will be able to work together, with the aim of presenting a working implementation at the end of the project.
- To develop and test the solution.
- To record and write up research in association with colleagues and supervisors. To prepare and submit manuscripts to journals and conferences.
- To facilitate effective training and technical achievements.

- To prepare regular progress reports for presentation to the project team.
- Such other duties, commensurate with the grading of the post that may be assigned by the Head of Department or their nominee.

Internal & external relationships

Internal: The Associate will be based at NicheCom's office in Wokingham, and be supervised by the business supervisor, Mark Orme, from NicheCom and the academic supervision team led by Dr Marek Grzes from the School of Computing at the University of Kent. The Associate will be an integral part of the Technology Team within NicheCom, and when appropriate will share progress updates with senior business stakeholders.

External: The Associate will work with NicheCom's photographers to see the process at properties, as well as work with estate agents. There will be the occasional requirement to attend conferences as well as engage with other third parties, such as image providers and external editing teams.

There is a possibility that the Associate will be required to visit NicheCom's Editing Team in Cape Town, South Africa during the project.

Health, safety & wellbeing considerations

This job involves undertaking duties which include the following health, safety and wellbeing considerations:

- Regular use of Screen Display Equipment
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Person specification

The person specification details the necessary skills, qualifications, experience or other attributes needed to carry out the job. Applications will be measured against the criteria published below.

Selection panels will be looking for clear evidence and examples in an application, or cover letter (where applicable), which back-up any assertions made in relation to each criterion.

Essential Criteria:

- A PhD, or close to completion, in statistics/machine learning, computing, or engineering, or a related discipline, or equivalent qualification/experience (A)
- At least a BSc 2:1 in Computing or in a related discipline, or equivalent (A)
- Experience in conducting literature reviews and determining research methodologies in association with a supervisor (A, I)
- Experience in software development (Java and/or Python) (A, I)
- Ability to use software development delivery methodologies to build systems that work in practice (I)
- Excellent communication skills, including the ability to write for publications, present research proposals and results to non-scientific audiences, and represent the research group at meetings (T, I)
- Proven time management skills, including managing project outputs and associated activities and work under pressure. (I)
- Team working skills (I)
- Ability to work both independently and use initiative (I)
- Ability to adapt and work creatively to resolve technical problems (I)
- Ambition to work in a commercial environment and ensure commercial success of the project (I)

Desirable Criteria:

- Experience in data analysis, machine learning (e.g. for imagine, video or audio processing) (A, I)

- Experience in writing reports and papers (A, I)
- Experience of explaining complex technical issues to non-technical stakeholders (I)
- Previous working experience with industry (A,I)

Assessment stage: A - Application; I - Interview; T - Test/presentation at interview stage