

Candidate Information

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| Position: | Research Assistant (Engineer - Computer Vision Graphics C/C++) |
| School/Department: | Research (AEL) |
| Reference: | 21/108615 |
| Closing Date: | Monday 15 February 2021 |
| Salary: | £28,331 per annum |
| Anticipated Interview Date: | Monday 1 March 2021 |
| Duration: | Available for up to 24 months until 23 April 2023 |

JOB PURPOSE:

To support industry-focused R&D work as part of UKRI funded FutureScreensNI programme, a collaboration between Queen's University and Ulster University.

To work at the cross section of storytelling & technology enabling sectors involved in film, broadcast, animation, games and industries utilizing immersive technologies take advantage of accelerating technology shifts.

To support interdisciplinary research contributing to the knowledge base in arts and computer science in image, video and geometry processing.

To work closely with research teams supporting the production of academic outputs and onward development of technology demonstrators aimed at making outputs more accessible to creative industry partners.

To promote the generation of intellectual property and accelerate its exploitation using innovation funding streams and close interworking with industry and government agencies.

To perform technology transfer activities and provide technical assistance to fledgling creative industry companies.

Key themes

- Content-Centred Design – Understanding expression and experience in digital forms through Human Computer Interaction in media, cultural and social contexts
- Media Production Innovation - Building the capture, rendering and asset generating tools for Virtual production and empowering creativity
- Human Data Interaction – exploring Data and AI applications in creative production, entertainment platforms and social contexts

MAJOR DUTIES:

1. Support industry-led research, development and knowledge transfer in the area of Computer Vision technologies for virtual production pipelines, real time 3D applications and the creative industries.
2. Support the development of proof of concept demonstrators for early stage user testing that deliver superior solutions.
3. Write up results of own work and contribute to the production of research reports, publications and proposals.
4. Engage with industrial partners to facilitate the transfer of capabilities into commercial production.
5. Participate constructively in multi-disciplinary research activities, including staff training and development.
6. Help develop the international reputation of FutureScreens through presentations, attendance at trade-shows and visiting major companies and research and technology centres worldwide.
7. Produce high quality technical reports and demonstrations to assist in generating funding opportunities to support further programme activity.
8. Carry out routine administrative tasks to ensure project goals are completed on time and within budget.

9. Undertake any other duties that may reasonably be requested by management.

Planning and Organising:

1. Plan own work to meet given objectives and processes within the framework of the agreed research/teaching programme.
2. Contribute to the planning of projects, reports and publications.
3. Timescales for most activities will range from 1-6 months in advance but will also contribute to longer term planning within the research group.
4. Liaise with other team members to achieve co-ordinated progress against objectives.

Resource Management Responsibilities:

1. Ensure the assigned research and development facilities and resources are used in an effective and efficient manner.
2. Provide guidance as required to supporting staff and students assisting with research activities.

Internal and External Relationships:

1. Liaise with research colleagues and support staff on routine matters.
2. Make internal and external contacts to develop knowledge and understanding and form relationships for future collaboration.
3. Coordinate and liaise with other members of the project team over work progress.

ESSENTIAL CRITERIA:

1. Honours Degree, or equivalent, in Computer Science or related engineering discipline with at least three years' relevant industrial experience OR minimum HND in related engineering discipline with at least five years' relevant industrial experience.
2. Demonstrable evidence of competence in developing software for Games, VFX or Immersive Technologies.
3. Well-developed software development skills in a high-level language such as C++, C#, and scripting languages such as LUA, JSON, Python etc... with direct experience with Unity3d/Unreal.
4. Experience of using research tools and techniques resulting in high quality project and technical reports.
5. Demonstrate practical, problem solving approach to developing technologies and creative application of technical knowledge.
6. Breadth and depth of understanding of Real-time 3D systems, Shader Development and GPGPU processing.
7. Evidence of delivering on multifaceted projects, with deadlines and budgets.
8. Understanding of industry standard workflows in the Film/Broadcast, VFX and Games sectors.
9. Evidence of communicating complex technical information to a range of stakeholders.

DESIRABLE CRITERIA:

1. Hold or be about hold a relevant higher degree or Ph. D in Computer Vision, Computer Graphics or Image Processing.
2. Experience of collaborative research and effective working in a team.
3. Evidence of working in high technology start-ups or Media based businesses.
4. Experience of use and impact of technology in the creative industries.
5. Evidence of assisting preparation of bid proposals.