UNIVERSITY OF DERBY

JOB DESCRIPTION

JOB TITLE	Research Software Engineer – Virtual Reality Specialist (fixed term 20 months)		
DEPARTMENT / COLLEGE	College of Engineering and Technology		
LOCATION	Unit 10 Derwent Business Centre Clarke Street, Derby DE1 2BU		
JOB NUMBER	0733-19-R	SALARY	£30k - £40,000 per annum budget of £3,500 for further training and career development.
REPORTS TO	Director, Bloc Digital and Professor of Distributed Systems, University of Derby		

Role Summary

The project involves the integration of big data and visualization in a VR environment.

Working with data scientists, you will help design and implement a VR system which will take live data streams from source data systems and process it so that they can be visualized instantly in a virtual environment. This will require interactively extracting intelligence from real time data, producing 3D models and streaming information to a VR framework for immersive visualization.

Creating VR visualizations from real world data and analytics offers a unique opportunity for new markets and applications. You will plan and implement additions and updates to a VR framework to receive and interactively visualize data in VR environment.

This position requires very hands on skills, therefore good system development, programming and database development experience is must. A good understanding of commercial grade software engineering and product development experience will be required. You will be highly committed and respond well to deadlines.

Principal Accountabilities

- Investigating real time visualizations models and algorithms and their integration with VR platform
- Receiving data streams from distributed databases producing 3D visualizations and streaming to VR platform
- Exploiting engineering data, prepare queries and workflows for information retrieval for different visualization scenarios in VR
- Visualization of data in 3D VR environment by producing 3D models of data in real time
- Producing real time, reliable data acquisition and visualization capability - a major market advantage bringing benefit to the company and our customers
- Securing streams of data between systems
- Optimizing to deliver an acceptable user experience by enabling the systems to offer quality of service and functionality
- Manage the project with independence, including provision of project update reports, high quality demonstrations and evaluations as appropriate
- Liaise closely with industrial and academic partners involved in the project
- Work in a multidisciplinary team to quickly understand requirements and build solutions
- Provide a high level of integrity and commitment towards the project
- Produce high quality publications
- Intellectual Property (IP) management including patents

Person Specification

1. **Essential Criteria**

Qualifications

- PhD in Computer Science or relative subject or equivalent experience

Experience

- Strong expertise in VR application development
- Engineering and physical data modelling and visualisation including Materials Mapping, Heat Maps, Pressure Maps, CPD, FEA etc.
- Distributed system design and development
- An understanding of networking protocols, file systems
- Strong expertise in VR application development experience
- Advanced VR visualisation and data presentation

Skills, knowledge and abilities

- Work in a fast paced environment
- Strong foundations of C# and Unity
- Familiarity with JavaScript and Python programming
- Familiarity with Git, CMake or scons, JIRA, Jenkin etc.
- Industrial system development tools and IDE's

Business requirements

- Excellent analytical and writing skills
- Project management
- Problem solving skills (methodical way of thinking)
- Communication skills (interpersonal, report writing etc.)

2. **Desirable Criteria**

- Unity certified
- Developing VR applications with HTC Vive
- Excellent communication and presentation skills
- Ability to understand business requirements
- Good sense of humour, can-do approach to challenges and the ability able to work in a face paced company with quickly changing requirements

Benefits

Personal development budget of £3,500 for further training and career development.
Travel and Subsistence for relevant events etc

Company address: Unit 10 Derwent Business Centre Clarke Street, Derby DE1 2BU
Probation period: 3 months
Working hours: 9am - 5pm (flexible start/end times)
Annual leave: 28 days
Notice period: 1 month