

Junior Data Visualisation Analyst

Who are we?

We are the University of Cambridge's presence in Singapore, Cambridge CARES. Our activities are sponsored by the National Research Foundation's CREATE programme. Our first research programme, Cambridge Centre for Carbon Reduction in Chemical Technology (C4T), is a collaboration between University of Cambridge, Nanyang Technological University and National University of Singapore.

Our team is comprised of world-class scientists and engineers working in a vibrant, fast-paced environment with great opportunities for knowledge and skills development.

Who are we looking for?

We are looking for a talented and creative Junior Data Visualisation Analyst to support the J-Park Simulator (JPS) Project for data visualisation. The candidate should be specialised in creating stunning interactive feature with the various sources of data and models.

The JPS project aims at a comprehensive virtualisation of industrial operations, *i.e.* a hierarchical representation of data and models associated with every entity in an industrial park, in order to exploit synergies for resource, energy, and emissions savings. The overall goal is, using ideas from the Semantic Web, Internet of Things, Industry 4.0, machine learning, artificial intelligence, and statistics, to create an integrated simulation platform and expert system capable of providing quantitative decision support.

The successful candidate will be expected to:

- Support the develop of our main software tool (JPS). This will involve keeping abreast of the latest web technologies and supporting design decisions.
- Support the development of analytics solutions by conceptualising, designing, developing, documenting and maintaining high-impact visuals that express insights or complex scenarios in intuitive ways
- Collaborate with team to understand needs for actionable insights
- Integrating efficient 2D and 3D User Interface system
- Build a data model of entities which makes use of a geographical information system (GIS)
- Support in designing and developing executable programs and browser based applications
- Identify, evaluate new technologies and resolve performance and scalability issues
- Communicate complex technical concepts during team presentations
- Opportunity to participate in research discussions with local industries and partners, overseas universities, and writing reports
- Opportunity to write conference / journal papers and reports

What skills will you need?

- A good degree in Computer Science, Information Technology and Computer Engineering

- Knowledge of tools such as Unity, Unreal, object-oriented programming languages (Java), scripting languages (Python), IDEs (NetBeans, Eclipse), Protégé, TBC and Chrome developer tools
- Experience in UX design, CSS, WebGL, shader programming, NodeJS, gaming industry/software engineering/web development using C++/Java, as well as JavaScript/PHP, etc
- Some understanding of relational and non-relational database management systems, semantic web and ontologies, HTTP protocol, APIs and data exchange formats such as XML and JSON (an advantage)
- Mathematical and statistical skills, with experience in algorithm and methods development (an advantage)
- Strong communication and interpersonal skills to work as part of a dynamic, multidisciplinary team of researchers

What can we offer you?

- A stimulating working environment with friendly, highly motivated colleagues
- A competitive salary in line with your skills and experience
- A one-year contract in the first instance, extendable following a satisfactory performance
- Comprehensive medical insurance coverage as part of your employment
- Employment under a Research Collaboration Agreement between CARES and Nanyang Technological University (NTU)

Please note that this post is based in Singapore.

To apply, please send your CV and cover letter (summarising the most relevant skills and experience that you have for the position) to cares@hermes.cam.ac.uk.