

## **Senior Software Developer**

### **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 senior software developer to support the C4T research team. Primarily, we are looking for an individual dedicated to data-driven modelling, semantic representation and visualisation of chemical processes and industrial networks of an industrial park.

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

The successful candidate will be expected to assume intellectual leadership in the development of the theoretical and mathematical foundations as well as the wider, ongoing development of our main software tool. This will involve keeping abreast of the latest web technologies, making key design decisions, and ensuring their realisation. Being part of a 3-member consortium will require close interaction with collaborators. Activities will include participating in research discussions with local industries and partners, overseas universities, and writing reports as required by the National Research Foundation (NRF) of Singapore.

### **What skills will you need?**

- A degree in a relevant discipline such as computer science, mathematics or physics
- At least five years of relevant experience
- Demonstrable experience in software engineering using Java or Python
- Willingness and capability to acquire software skills and knowledge about modern technologies
- Some understanding of thermodynamics and reaction kinetics, electronic structure theory, relational and non-relational database management systems, semantic web and ontologies (an advantage)
- Mathematical and statistical skills, with experience in algorithm and methods development (an advantage)
- Excellent oral and written communication skills in English

### **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 this post is mainly based in the CREATE Tower at NUS University Town, Singapore.

### **How to apply?**

Please apply by uploading your CV and academic transcript to <https://talent.sage.hr/jobs/de5a0cb0-9597-48a9-80f5-2b8e7998b0f3>. If you have any questions, please feel free to reach out to the HR team at [recruitment@cares.cam.ac.uk](mailto:recruitment@cares.cam.ac.uk).