

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 computer scientist, computer engineer or computational mathematician to support the C4T research team. Primarily, we are looking for an individual dedicated to physics- and chemistry-based and data-driven modelling, semantic representation and visualisation of chemical processes and industrial networks of an industrial park. The post holder will:

- build data models
- visualise data in a modern media lab
- develop software systems
- perform data integration
- participate in research discussions with local industries and partners, and overseas universities

The project aims to develop new methods and algorithms to support the development of chemical reaction mechanisms. Aspects of particular interest include automatic generation, coupling to first-principles quantum chemistry calculations and ontological data representation.

The successful candidate will be expected to collaborate closely with the Cambridge CARES research centre, sponsored by the NRF CREATE program in Singapore. The methods resulting from this project will need to be seamlessly integrated into an existing comprehensive virtual simulation platform which is currently being developed as part of Cambridge CARES, using ideas from Industry 4.0, Internet of Things, the Semantic Web, machine learning and statistics.

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 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.