Student Internship – Engineering

About CFMS

The Centre for Modelling and Simulation (CFMS) is a growing, independent digital engineering research organisation providing technical expertise to help organisations create cutting-edge solutions by pioneering new approaches to product development, solving hyper-complex problems and enabling innovation services.

As a nationally recognised centre of excellence for modelling and simulation, our highly collaborative team of passionate and pragmatic problem solvers thrive on challenges others consider insurmountable, delivering game-changing, evidence-based solutions that surpass expectations and impress every time.

Working with commercial and research organisations of all sizes, we have a full portfolio of digital innovation capabilities, including design and analysis services, consultancy, and IT infrastructure. We use digital innovation across the cyber-physical landscape to help develop more effective engineering solutions across industrial sectors critical to the UK economy.

As a commercially focused organisation, we reinvest profits from commercial activity into the continued development of our people, facilities, and research capability, allowing us to continue to innovate and push the boundaries of what is possible.

We have an exciting range of technologies and development programmes across a variety of sectors including aerospace, rail, construction, energy and space. Our expertise in advanced simulation, model-based engineering, data science, and robotics is underpinned by our in-house IT infrastructure. The close collaboration between our expert in-house teams enables greater innovation, knowledge sharing and more beneficial results for our customers.

About the role

We work with companies who are experienced in the use of mathematical modelling and those wanting to make greater use of simulation to tackle interesting and challenging digital modelling problems. We also work closely with academics and technology partners to create and evaluate new modelling algorithms and techniques, assess how they scale and how they can be applied to High Performance Computing (HPC).

As an engineering intern, you will work closely with our team of experts across systems engineering, mathematical modelling and simulation, data analytics, robotics, advanced IT systems and HPC hardware. You will help to develop and prove new digital capabilities, matched, where possible, to your background and interests.

As an integral part of the CFMS team, you will work on real-world digital engineering problems with opportunities to interface with customers, gaining highly valuable experience.

Developing the next generation of engineers is important to CFMS and we also understand the desire to take theoretical understanding and turn it into practical outputs. With the support of the technical team, you will be empowered to do this, increasing your knowledge of the applications of theories and methods.

Many of our interns return as full-time employees, providing further development and learning opportunities.

Role and Responsibilities

Roles and responsibilities are dependent upon the candidate, and will include elements of:

- Collaboration with other CFMS technical team members on development, testing and benchmarking activities
- Modelling physical phenomena using open source and vendor tools
- Development of new algorithms, methods and tools to meet engineering, simulation and HPC deployment challenges
- Deploying and maintaining HPC hardware and facilities
- Working with end users to understand and meet requirements
- Presentation of results to a range of audiences including internal and external stakeholders
- In depth technical report writing, explaining and justifying methods and solutions

Skills Required

- Currently studying for a degree in a STEM or similar subject
- Ability to think logically and critically apply knowledge to solve novel problems
- Strong background in a numerate STEM subject with some experience of programming
- Ability and interest to engage with new technology and concepts
- Ability to work well both independently and collaboratively within a technical team
- Ability to liaise with customers and technology partners/suppliers
- Ability to summarise and explain complex technical concepts to both technical and general audiences

How to Apply

Please send your up-to-date CV and a covering letter, indicating where your interests lie, to: Recruitment Manager, email: careers@cfms.org.uk, with the subject line of your email: “Internship” by 8th November 2024.

Late applications will not be accepted.

This is a 12 month Internship: 1st September 2025 until 28th August 2026.