CAMBRIDGE
FLOW SOLUTIONS
Proprietary and customised CFD

Senior Software Development Engineer (SDE2022)

Are you a enthusiastic and experienced Software Development Engineer who wants to drive the development of our innovative computational geometry modelling Digital Geometry™ kernel in our BOXERgeom software?
Are you motivated and excited to work with large scale and complex software?

We are seeking a talented software developer to work at the very heart of the company developing and leading on code meshing and geometry computation, as we continue to identify and exploit emerging commercial opportunities for BOXERgeom.

BOXERgeom is an innovative product which allows clients to :

- Understand & Mitigate In-service Geometry Degradation
- Exploit the Power of Digital Geometry for AI/ML

We are looking for someone with

- Excellent C++ programming skills and worked with C++11 or later standards. One should have strong knowledge of object-oriented design, templates, serialization and design patterns.
- Strong coding experience in mesh generation. One should be familiar with different concepts of mesh generation i.e., structure/unstructured/hybrid meshing algorithms, efficient data structures for handling large meshes, mesh quality improvement and parallel distribution of meshes.
- Good knowledge of computational geometry

Technical Skills:

- Familiarity with CFD, FEA or other simulation practices
- Experience with working with large C++ graphics, GUI or numerical libraries such as Qt or Boost
- Knowledge of FORTRAN, Python & Java Script
- Parallel programming, e.g. MPI, Open MP, plus HPC and other distributed hardware environments
- Primarily, Linux development plus familiarity with Windows

Personal Qualities:

- Team work and collaboration
- Using Initiative
- Problem-solving
- Adaptable

About Cambridge Flow Solutions:

Our deep CFD and software development experience allows us to develop and implement simulation software, which we can tailor to the specific requirements of our partners. Our primary product is BOXERmesh, which we develop and sell commercially, but we also work with a wide range of 3rd party software. We maintain active development of our software products, in response to feedback from partners and customers. True to our aim of further promoting practical, fully integrated simulation workflows, we have now extended our core capabilities into the additional areas of geometry handing, editing & management, BOXERgeom and flow solving, BOXERsolve.

- Our core business is to collaborate with industry in a strategic research partnership
- We develop specialised and customised software to support advanced, real-world simulation

- We span the space between lower TRL university research and higher TRL level industry needs
- We support business opportunity both by transforming the efficiency and robustness of current workflows and also by creating and supporting new revenue streams
- We offer solutions across a range of **industries** based on our core research vehicles:
    - **BOXERmesh, a robust scalable fully parallel mesh generator**
    - **BOXERgeom, a voxel-based Digital Geometry™ modelling kernel which supports MRO, AI/ML**
    - **BOXERsolve, a highly customisable ale RANS/LES/thermal solver**

Applications Engineering:
CFS also provides application support to our range of industrial clients and partners, further improving their capabilities and adding value. We pride ourselves on close and regular customer contact, and have extensive, practical experience in developing and applying:

- Unstructured mesh generation
- Geometry management & editing - including mesh deformation techniques
- CAD import & tessellation for mesh generation, and CAD parameterisation for optimisation
- Steady/unsteady RANS CFD & LES/DES
- Conjugate aero/thermal simulation
- Parallelised software architecture
- GUI development

Salary £50,000 to £60.000 per annum depending on experience.

With offices on the world-renowned Cambridge Science Park, UK and Japan, we are continually looking for exceptional talent, particularly in the areas of Computing, CFD/CAE applications engineering, consulting, sales and support. We offer stimulating work in a young and dynamic company with exciting prospects.

Please email with a stated salary expectation and the job reference, SSDE2022 when applying. Only applications with this salary information will be considered.

Closing date: 21 September 2022

Please forward all applications (enclosing a CV and cover letter) to careers@cambridgeflowsolutions.com

There will be a two stage interview process with an initial telephone interview and then successful candidates will be asked to attend an interview online or in person.

Cambridge Flow Solutions is an equal opportunities employer and we welcome applications from all suitably qualified persons.