

## JOB OFFER

### Senior Machine Learning Research Engineer/Scientist

Cenaero, located in Gosselies (Belgium), is a private non-profit applied research center providing to companies, involved in a technology innovation process, numerical simulation methods and tools to invent and design more competitive products. Internationally recognized, in particular through its research partnership with Safran, Cenaero is mainly active in aeronautics (with an emphasis on turbomachinery), space, manufacturing processes, and buildings and smart cities.

Cenaero provides expertise and engineering services in multidisciplinary simulation, design and optimization in the fields of mechanics (fluid, structure, thermal and acoustics), manufacturing of metallic and composite structures as well as in analysis of in-service behavior of complex systems and life prediction. Cenaero also provides software through its massively parallel multi-physics platform Argo, its manufacturing process simulation and crack propagation platform Morfeo and its design space exploration and optimization platform Minamo. Cenaero operates the Tier-1 Walloon supercomputing infrastructure with 14,000 computing cores (see tier1.cenaero.be) presently being renewed.

Passion drives us, boldness moves us forward to ambitious projects. Scientific rigor and intellectual curiosity fuel our quest for high-quality work.

To support the expanding research activities focusing on AI, we are looking for a **senior research engineer/scientist in machine/deep learning** (M/F) and offer a permanent contract (CDI) within our team in Belgium.

#### Position

The candidate will participate in cutting edge research in artificial intelligence and develop solutions at the intersection of physics-based simulation and machine learning to push the limits of real-world system modeling. In this position, the candidate will work in close collaboration with scientific software developers and research engineers in various fields (Aerospace, Manufacturing, Energy, Buildings, ...), with a direct connection to industrial needs and cases. The candidate is expected to both adequately exploit existing (open source) software tools and develop new tools and methods to reach the objectives. He/she will be part in the full development cycle, from design and coding to testing and documentation.

#### Profile

##### Required qualifications:

- PhD in Engineering, Applied Mathematics, Data Science, Physics, Computer Science, or demonstrated equivalent experience
- Minimum 3 years of hands-on experience developing non-intrusive or semi-intrusive reduced order modeling methods
- Experience in Machine Learning technology, including neural networks architecture, algorithms, models, training and optimization, with a specific focus on physics/knowledge-informed methods
- Experience with at least one major deep learning framework (TensorFlow, PyTorch, MxNet, ...)
- Good knowledge of deep learning theory (CNNs, RNNs, LSTMs, ...)
- Experience in numerical simulation methods
- Strong programming skills (Python, C++, ...)
- Excellent analytical skills and solution-oriented thinking capabilities
- Proven ability to work both independently and in interdisciplinary team/project-based environment

- Good analytical and communication skills (written and spoken)
- Fluent in French and in English

### **Offer**

Cenaero offers a position in growing and leading technological sectors, a direct relationship with their business actors and technical experts, a competitive salary package and a stimulating and dynamic work environment.

### **Contact**

Motivated candidates are invited to send their resume and motivation letter to [rh@cenaero.be](mailto:rh@cenaero.be) and to mention the job offer reference.