



Research Scientist (AI)

The Opportunity:

IBEX Innovations Limited is seeking a talented Research Scientist with a focus on Artificial Intelligence, to develop cutting edge software products for the medical X-ray imaging market. The role is ideally suited to a PhD or Masters level Mathematician, Theoretical Physicist or Computer Scientist. The role provides an opportunity to someone seeking to enter the world of medical X-ray imaging and to develop their skills working within an exciting and challenging work environment.

About IBEX®:

IBEX is a technology business in the advanced stages of commercialisation of patented X-ray detector technology for application to the medical X-ray imaging markets. IBEX is focussed on one goal: to apply advanced physics modelling, statistics and AI methods to extract the maximum amount of useful diagnostic information from every single X-ray. Our vision is to improve patient lives through earlier and more accurate diagnosis and to improve efficiency and reduce costs for health care providers everywhere.

IBEX is an equal opportunities employer. We believe that inclusion and diversity are key to the company's success and that people from diverse backgrounds bring unique experiences and fresh ideas to the company. We therefore positively encourage applications from people of all backgrounds regardless of sex, race, disability, age, gender reassignment, sexual orientation, marriage or civil partnership, pregnancy or maternity, religion or belief.

Based in modern offices on the NETPark Science Park in beautiful County Durham, IBEX currently employs 22 highly skilled staff including scientists, mathematicians, software engineers, and business professionals.

The primary responsibilities of the role will be to:

Reporting to the AI Team Lead; the research scientist will work across a wide variety of projects and will be responsible for developing solutions to a wide range of interesting problems, as well as assisting in the maintenance and development of the codebase. Key responsibilities include:

- Developing solutions to problems in the company's key focus areas.
- Writing clean, maintainable, robust code in python to support internal project delivery.
- Supporting the R&D team by championing good practice in code development
- Managing internal data assets such as radiographs and labelled data to ensure accessibility, traceability and reliability.
- Developing and running photon transport simulations
- Keeping up to date with the latest developments in the field and how they can be applied to solve problems within IBEX.

Additional responsibilities, dependent on experience:

- Optimizing software for GPU parallelization using CUDA.
- Interfacing between python, MATLAB and C++ to leverage the benefits of each.
- Oversee the future scaling up of computational resources to support physics-based simulations.

Candidates should possess the following skills and experience:

- Excellent python programming skills. Experience with scientific packages such as scipy, numpy, pandas and jupyter and/or image processing libraries such as openCV.
- Ability to manage large volumes of complex data types.
- Experience of developing algorithms for solving real world problems.
- Experience of commonly used software tools such as GitHub and IDEs to improve code development.



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Additional skills and qualities which would be beneficial:

- An understanding of particle simulation, ideally in the field of X-ray physics e.g. GEANT4, or more general ray-tracing and simulation tools such as Optix, Embree
- Good C++ coding.
- Experience with CUDA/GPU programming.
- Understanding of GPU's and parallel computing/HPC.
- Knowledge of MATLAB.
- Domain knowledge in Medical Imaging, Medical Physics or x-ray physics.

Education

Degree with industry experience, or a Masters or PhD in Maths, Physics or Computer Science related discipline.

Location

NETPark Science Park, Sedgefield, County Durham

Salary and Benefits:

Salary: Competitive salary based on experience.

Benefits: IBEX operates a flexible benefits scheme including pension and life insurance.

Share Options: Share options are available following successful completion of a three-month probationary period.

Holidays: 25 days plus bank holidays

Working: A mix of home/office working is available.

Parking: Free

Closing Date:

Open

Please note should sufficient applications be received IBEX reserve the right to close this vacancy at any time, we always encourage all interested applicants to apply at their earliest convenience to avoid disappointment.

Data Protection and Equality:

As part of the application process, we will ask you to optionally provide some personal information which will assist us to meet our diversity and inclusion goals and ensure that underrepresented groups are fairly assessed. Only those involved in the recruitment process at IBEX will have access to this information and all personal information will be deleted from our systems should your application be unsuccessful.

Please do not hesitate to contact us if you would like to discuss any adjustments to our process which might help you demonstrate your strengths and capabilities.

Should you be successful at interview, we will ask you to complete a right to work checklist prior to commencing employment with IBEX, as proof you are eligible to work in the UK.

If you are interested in this position, please forward your CV and cover letter to:

k.scott@ibexinnovations.co.uk