

# Job Description: Data Scientist

## Background

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nuron is an innovative young company developing a suite of optical fibre monitoring technologies for utilities. The first of these will transform the wastewater industry into one that is monitored and managed, delivering real operational and economic benefits while protecting the environment in which we live. Wastewater networks remain almost completely unmanaged and there is a shortage of scalable monitoring technologies.

The technology also provides the ability to roll out dense urban fibre networks faster, more cost effectively and with significantly less disruption than conventional civils. This will result in the sewers becoming a vital enabler for true fibre to the premise, 5G and smart cities of the future delivering widespread social and economic benefits.

Over the past 8 years, nuron has successfully proven the concept of fibre optic monitoring of the operational conditions in sewers. Following the successful completion of our customer pilot within a UK water company's live sewer network in 2020, we are now preparing to scale-up the technology, as part of a large commercial roll-out and develop solutions for other utilities

nuron was founded by the ex-COO of Geo Networks Limited (sold to Zayo in 2014 for £186m). It is led by a team of experienced directors from business and engineering backgrounds, all with track-records of growing successful, profitable technology-driven companies.

We plan for nuron to grow considerably over the coming years with a business plan rolling-out 100s of Kms of our system each year globally. This role offers an immediate opportunity for the right candidate to play a key role in an early-stage business, whilst providing a suite of development opportunities.

## The Role

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nuron is looking for people who are responsible, creative and spirited in everything they do, to deliver measurements and data capabilities fulfilling our customers' needs.

The successful candidate will have a passion for data, algorithms and visualization. They will be driven to help nuron build successful services and solutions using our unique data to deliver for our demanding customers.

This is a fantastic opportunity to deliver significant value to nuron and grow with us.

In this role, the successful candidate will:

- Develop and test algorithms for nuron's unique monitoring system to fulfill demanding customer requirements, working as part of nuron's data science team.
- Build and grow nuron's machine learning and artificial intelligence capabilities.
- Analyse data from laboratory experiments, large-scale tests and field data.
- Maintain an up-to-date view of current data science techniques and propose new opportunities for development.
- Develop new ways to visualise and understand our data for development and customer application.
- Maintain nuron's code base as new algorithms are created
- Maintain tracking documentation for algorithms and techniques.
- Implement prototypes of algorithms for testing and evaluation.
- Work with nuron software team to implement best practice software development and management systems.
- Interface with nuron software team to implement processing and display capabilities based on your algorithms.

- Support commercial deployments of the nuron system including pre-sales data science analysis/demonstration, set-up of monitoring service, calibration and training of customers.
- Communicate plans and findings to nuron management, external stakeholders and customers using reports and presentations.
- Participate in capture of intellectual property including, where appropriate, new patent filings
- Participate fully in the life of nuron, helping to shape our growth.
- Work with other teams within nuron to deliver customer and R&D projects as needed.

## Requirements

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### Essential

- At least three years' experience in data science in a professional or academic environment with a proven track record in delivering functioning solutions to problems using data.
- Strongly numerate and driven to understand the science behind the data.
- Relevant degree in a STEM subject or equivalent experience.
- Proficient in MATLAB, python or equivalent.
- Excellent problem-solving skills and creativity.
- Can-do flexible attitude.
- Good written and spoken communication skills.

### Desirable but not essential

- Experience in acoustics, optics or fluid mechanics.
- PhD in relevant field with evidence of novel independent research.
- Previous experience of data science and artificial intelligence.
- Skilled in use of data visualisation tools.
- Experience in presenting at conferences or to customers.
- Experience working with Microsoft Azure.
- Project management training.
- Experience in FEM modelling.
- Proficient in multiple programming languages.
- Experience of industrial-academic collaborations.
- Experience working with customers.

**Reporting to:** Lead Scientist

**Location:** Remote working in UK  
Approx. monthly visits to nuron Engineering Hub in Sheffield, UK  
Occasional UK and international travel, expenses paid

**Hours:** 37.5hrs per week

**Salary:** Competitive

If interested, please email your CV to: [paul.dickenson@nuron.tech](mailto:paul.dickenson@nuron.tech)