

Data Scientist

Department	Power Networks Demonstration Centre (PNDC) (http://www.strath.ac.uk/pndc/), Department of Electrical and Electronic Engineering (http://www.strath.ac.uk/eee/)		
Faculty	Faculty of Engineering (www.strath.ac.uk/engineering/)		
Staff Category	Knowledge Exchange	Reference No	107717
Reports To	PNDC R&D Manager	Grade:	7
Salary Range:	£31604 - £38833	Contract Type:	Fixed Term (3 years)
FTE:	1 (35 hours/week)	Closing Date	Sunday, 18 February 2018

Job Advert

The University of Strathclyde in Glasgow possesses a large internationally rated Engineering Faculty with a proud history of successful joint ventures with industrial and enterprise partners. As part of the University's strategic development, the Power Networks Demonstration Centre (PNDC) has been established in Wardpark North near Cumbernauld. The PNDC is a world-class facility with dedicated staff that will accelerate the adoption of new, 'smart' technologies within advanced power grids, supporting the increased accommodation of renewable energy, electric vehicles and demand side management. The £12.5 million Centre - the first of its kind in Europe – has been founded by the University of Strathclyde and leading energy companies including Scottish Power Energy Networks and Scottish and Southern Energy Power Distribution, with support from Scottish Enterprise and the Scottish Funding Council. With the addition of UK Power Networks, Vodafone, S&C Electric, CISCO, Omicron, and Locamation, the Centre has expanded its membership to eight industry partners and this growth is set to continue.

The PNDC provides: a purpose-built platform for showcasing state of the art electrical distribution, generation, storage and demand side innovation; a rapid technology pipeline accelerating the proving and deployment of integrated smart grid solutions with commercial partners; a realistic and controllable test bed from primary plant to state-of-the-art control room for the development of emerging smart grid technologies that will support the realisation of a de-carbonised grid. The PNDC is formally linked to the University through the Institute for Energy and Environment within the Department of Electronic and Electrical Engineering.

The PNDC seeks to appoint a Data Scientist (Knowledge Exchange Associate) with the ambition, talent and drive to develop insightful and impactful analytics in the smart grid domain in its unique, world-class industry-scale facility. The successful candidate will work as part of a growing dynamic team on a wide range of technical projects and research with particular emphasis on data exploration and analysis. Opportunities for innovation are extensive, through the strong working relationship and routes to market afforded by the PNDC industry members. This will be supplemented with collaborative opportunities with other research and industry teams in the UK and abroad.

This position will involve working primarily within the Network and Demand Side Management theme. However the applicant will have the opportunity to work across various research specialisms in an electrical utilities context: including communications and systems integration, sensors and measurement, asset management. Applicants will be comfortable manipulating large and diverse data sets from multiple sources in a variety of tools and have a passion for answering hard questions with data.

You should possess a good honours degree and possibly a PhD or equivalent professional experience, in computer science, electrical engineering, or a relevant numerate discipline, together with relevant professional experience. Good evidence of technical writing ability and general communication skills is important, as is the capacity to work in a dynamic team environment. As a self-starter, you will be able to plan and conduct individual research and knowledge exchange activities in a structured manner, as well as generate new ideas and concepts.

Job Description

Brief Outline of Job:

You will undertake specific research and development projects under the guidance of the PNDC R&D leadership team, providing regular updates and reports for industrial partners, and thus supporting the Centre objectives and targets. A strong engagement with industry colleagues, as well as with the PNDC and wider University team, will support the realisation of relevant and valuable results. You will lead specific research areas while contributing to others, and will develop project plans for consideration by industrial partners and clients as well as writing research proposals for geared funding. Through engagement with relevant professional and knowledge exchange activities, you will support the PNDC's external profile and technical leadership. Working as part of a dynamic team you will further support PNDC administrative and operational activities.

Main Activities/Responsibilities:

1.	Provide data analytics expertise across a number of research areas and projects, working as part of a small team and leading specific areas of research as directed by the PNDC management team.
2.	Provide technical leadership of data science related topics, collaboration with academics expert in this area, working with the PNDC R&D Manager to contribute to the realisation of strategy and forward looking materials. Maintain key relationships with industry partner contacts.
3.	Apply technical knowledge to industry issues to investigate and quantify problems experienced by PNDC members, and develop project outlines and project specifications for consideration as part of the Centre core programme. Contribute to the development of geared funding proposals, as part of this.
4.	Manage projects that you are working on, ensuring deliverables are met and clear reporting is available. Manage delivery of 3 rd party contributions or suppliers as required for a given project.
5.	Plan and manage own workload, with guidance from colleagues as required, while adopting safe and appropriate working practices.
6.	Maintain appropriate engagement with industrial members and third party vendors to ensure relevance and accuracy of work. Maintain professional awareness to ensure originality and exploitability of the research outputs.
7.	Provide quality technical and progress reports of research, development and testing work for distribution to members and clients, adopting best practice in effective knowledge transfer to members, and supporting wider dissemination at conferences and in peer reviewed journals.
8.	Provide mentoring, guidance and support to fellow researchers particularly in the area of data analysis to ensure maximum value to the PNDC objectives and targets.
9.	As part of the dynamic team at PNDC, contribute to the Centre's safe operational running, effective administration, and knowledge exchange events and initiatives.
10.	Maintain appropriate engagement with colleagues in the Institute for Energy and Environment and wider University teams, to support the capture of further funding opportunities, exploit synergy with other research programmes, and contribute to alignment with key industry member needs.
11.	Engage in continuous professional development, participating in external networks and consultations to maintain current knowledge of relevant state of the art, patent positions, products and Technology Readiness Levels.
12.	Contribute to policy and industry consultations where appropriate, in support of PNDC's sectoral contributions.

Person Specification

Educational and/or Professional Qualifications

(E=Essential, i.e. a candidate must meet all essential criteria to be considered for selection, D=Desirable)

E.1 Good honours degree (minimum class 2:1) in Computer Science, Electrical Engineering or similar

D.1 PhD or equivalent professional experience

Experience

E.2 Experience solving analytical problems using quantitative approach

E.3 Experience of manipulating complex, high volume data from varying sources, using programmatic approach

D.2 Experience of Network and Demand Side Management technologies and systems in a utility context

D.3 Experience of operational systems used by electrical utilities

E.4 Experience with the preparation of reports and technical papers

Job Related Skills and Achievements

E.5 Developing ability to conduct individual research and knowledge exchange activity

E.6 Fluency in high level programming languages for automation and data preparation e.g. Python, Java

E.7 Expert knowledge of a data analysis tools e.g. Python, iPython, PANDAS, R, Matlab

D.4 Experience working with large data sets, experience working with cloud computing platforms, staging and deploying resources as required

D.5 Excellent interpersonal and communication skills, with the ability to listen, engage and persuade, and to present complex information in an accessible way to a range of audiences.

Personal Attributes

D.6 The ability to work independently, with minimum supervision, and as part of a small team.

E.8 Enthusiastic and able to work to deadlines, with a customer focus.

Application Procedure

Applicants are required to complete an application form including the name of three referees who will be contacted before interview without permission, unless you indicate that you would prefer otherwise. Applicants should also submit a Curriculum Vitae and a covering letter as a single document detailing the knowledge, skills and experience you think make you the right candidate for the job. Applicants should also complete the Equal Opportunities Monitoring Form.

Other Information

Further information on the application process and working at Strathclyde can be found on our website (<http://www.strath.ac.uk/hr/workforus>).

Informal enquiries about the post can be directed to Alan Dunn, PNDC Chief Operating Officer (alan.dunn@strath.ac.uk/+44 1236 617172).

Conditions of Employment

Conditions of employment relating to the Knowledge Exchange staff category can be found at: [Conditions of Employment](#).

Probation

Where applicable, the successful applicant will be required to serve a 9 month probationary period.

Pension

The successful applicant will be eligible to join the Universities' Superannuation Scheme. Further information regarding this scheme is available from [Payroll and Pensions](#).

Relocation

Where applicable, the University offers a relocation package to support new employees who meet the eligibility criteria. The relocation package is offered as a contribution towards costs incurred, and is designed to be flexible, allowing staff to use the financial support available in the way that will be most helpful to them. Further details are outlined in the Relocation Policy.

Equality and Diversity

We value diversity and welcome applications from all sections of the community.

The University currently holds a Bronze Athena SWAN award, recognising our commitment to advancing women's careers in science, technology, engineering, maths and medicine (STEMM) employment in academia.

