Are You Our New Data Science Intern?

The basics

Location	Central London
Reporting to	Senior Data Scientist
Salary	£18,000 pro rata on 3 months
Working hours	Full time The pattern of hours may vary according to operational needs and generally work will be carried out during normal office hours. We're a flexible employer.
Contract	3 month-internship
Holidays	25 days per annum, plus statutory holidays
Equal Opportunities	We strive to be an equal opportunities employer and commitment to this process will be expected.

Who are we?

We are Future Cities Catapult. We develop and test urban solutions and accelerate them to market, to grow the UK economy and make cities better. We bring together businesses, universities and city leaders so that they can work with each other to solve the problems that cities face, now and in the future.

From our Urban Innovation Centre in London, we provide world-class facilities and expertise to support the development of new products and services, as well as opportunities to collaborate with others, test ideas and develop business models.

We help innovators turn ingenious ideas into working prototypes that can be tested in real urban settings. Then, once they're proven, we help spread them to cities across the world to improve quality of life, strengthen economies and protect the environment.

Our Cities Lab provides data analysis, modelling and visualisation capabilities to understand and elucidate city problems, while on-the-ground demonstrators in our network of collaborating cities provide opportunities for testing new approaches in-

situ. Combined, they help us discover which new ideas can have the biggest impact on our urban environments.

By bringing together the UK's top architects, engineers, designers, academics and business professionals, we can help them transform cities on a global scale. We will strengthen the UK's ability to turn excellent urban innovations into commercial reality.

We specialise in urban strategies, connected cities and urban data science. We use these capabilities to focus our work on three core themes: integrated urban planning, healthy cities and urban mobility. We can provide impartial advice about the most effective products and services – both off-the-shelf and bespoke – to help cities make the most effective use of their investments. We're about making innovation happen in cities.

So what is it about?

We want to show the world how interesting city-oriented data science can be. Cities are complex systems and providing insight into how they operate can be incredibly interesting and even help cities make changes for the better. However, because they're complex places, using cities as playgrounds for experiments isn't always easy. We want you to help us demonstrate the value of numeric approaches to city challenges by being our resident data science experimenter. If you're interested in open source software, reproducible science and applied numeric challenges then this might be the opportunity for you.

What will you be doing?

Main Responsibilities:

You will be leading the development, execution and documentation of two city data science experiments. Each experiment will address challenges relating to either healthy cities, integrated urban planning or urban mobility in cities respectively and so you should be open to interdisciplinary work. Specifically, these experiments will involve you:

- Identifying city challenges relating to healthy cities, integrated urban planning or urban mobility
- Sourcing open data to address these respective challenges
- Performing statistical / modeling analysis on the data to provide insight
- Documenting your process and your code
- Writing-up your experiments

- Generating compelling visualisations and blog pieces to document the insight generated as a result of your experiments.

The main goal of your internship will be to publish the results from your experiments online. In the spirit of open and reproducible research we want you to share the realities of the process of city-based data-driven experimentation.

What kind of person are we looking for?

We're looking for someone who's interested in city challenges and applied data science. We like to focus on transparent and reproducible data science and use open source freely available tools and data where possible. In fact, we like it so much we're developing tools to help make it easier for others. Because you'll be working with real-world data we want someone who's capable of working with setbacks and unforeseen challenges. If you like the sound of scraping, cleaning, analysing and visualising data and you have the know-how to do these things then we'd like to hear from you.

Essential requirements:

A background in a numeric discipline, for example computer science, engineering, one of the physical sciences or something similarly numerate. In particular, experience with experimental design, data manipulation, numeric analysis / modelling and scientific communication are desired.

- Experience with one of: R, Python, Julia
- Strong data acquisition / manipulation skills
- Experience with statistics and use of machine learning methods
- Experience with version control software
- Strong writing and dissemination skills

Desirable:

- Experience with front-end interactive visualisations, JavaScript etc.
- Demonstrated experience with end-to-end data science experiments
- Demonstrated application or development of mathematical models to city specific challenges.

Want to apply?

Send your CV with covering letter via our application portal. In your cover letter tell us why you're right for the job.

www.futurecities.catapult.org.uk
Twitter: @FutureCitiesCat