



## Senior Data Scientist, KTP Associate

**£50,000 - £60,000pa** depending on qualifications and experience

An exciting opportunity to be part of a Knowledge Transfer Partnership (KTP) between the University of Reading and Focaldata Ltd. The 24 month fixed term contract is to research and apply the latest computational methods in Bayesian statistics to build a state of the art data analytics pipeline, enabling a new type of market research company to be built.

### About Focaldata:

We came together united around a simple mission; that critical decisions, be that in government or business, should be driven by accurate and reliable information. We were shocked that some of the most important decisions our leaders had ever taken were based on an erroneous understanding of public opinion. And the problems weren't just in politics, they were everywhere.

Even more frustratingly, the AI revolution had given us the tools to get more accurate predictions than traditional survey methods.

Coming from Entrepreneur First, Google, and Cambridge and Warwick PhDs, we decided to build a new type of market research company, which applies the latest methods in computational statistics to survey data. We are committed to user-centric software design, and care deeply about our customers and the public. **Find out more by visiting:** <https://www.focaldata.com/>

### About KTP:

This position forms part of the [Knowledge Transfer Partnership](#) (KTP) funded by Innovate UK. It's essential you understand how KTP works with business and the University, and the vital role you will play if you successfully secure a KTP Associate position.

### What you will do:

This KTP position offers a unique opportunity to work alongside academics from the University of Reading and Focaldata's Chief Data Scientist.

You will research how to improve our Bayesian Insight engine, which primarily uses MRP (multilevel regression and poststratification), to estimate public opinion better. This research involves the development of novel methods in Bayesian statistics and machine learning, analysis on various datasets, and implementation of statistical models into production.

The position combines academic research with commercial focus. The candidate is expected to publish papers and also work in a commercial environment with real-world clients.

### Statistical Modelling

- Build Bayesian statistical models for analysing survey data
- Implement those models to production so that they run automatically on our GCP/AWS cloud infrastructure
- Optimise those models as we obtain new information
- Design automated processes for using data efficiently across our pipeline

### Research

- Transfer learning across commercial domains
- Uncover temporal dynamics of public opinion
- Discover population clusters with similar behaviour and opinion
- Infer public opinion in small geographic areas with limited amount of data
- Develop new regularisations/priors for Bayesian modeling

**You should have:**

- MSc or PhD in statistics, computer science, economics, mathematics, cognitive science, physics or other quantitative field
- Experience in applied Bayesian statistical modeling
- Fluency in Python or R
- Interest in campaigns, politics, or public opinion.
- Passion and eagerness to constantly learn and teach others

**Preferred Qualifications:**

- Experience with Bayesian probabilistic programming using languages such as Stan, pymc3, Edward (tensorflow probability), or JAGS
- Internship or work experience in applied statistics or machine learning
- Experience with MRP (multilevel regression and poststratification)
- Management of collaborative research projects in an academic or software engineering setting
- Knowledge of relational database and cloud computing infrastructure
- Knowledge of version control software such as git

**Benefits:**

- Beautiful office space on the canal near Old Street London, with breakfast and lunch cooked by in-house chef
- Free popcorn, coffee and tea, fruit
- £4,000 personal training budget

**If you have questions about this or other KTP vacancies contact:**

T: 0118 378 6142 E: [ktpjobs@reading.ac.uk](mailto:ktpjobs@reading.ac.uk)

***The advert will run for a minimum of 28 days with initial telephone screening. Successful candidates will be invited to Reading/London to attend face to face interviews. The advert will be withdrawn upon successful appointment to the role.***

***Closing date: 1<sup>st</sup> Jan 2019***

***Advert Ref: KT18004***

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