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HR8:1.3

Version 0.1

## JOB DESCRIPTION

APPENDIX C

Before completing this form, please read the BTP 'Guide to writing job descriptions for Police Staff roles' Appendix B to the SOP.

### A. POST DETAILS:

Job Title:	Data Scientist	Current Grade:	B004
Department:	Strategy and Performance	Area:	FHQ
Reports To:	Data Science Delivery Manager	No of Posts:	3
Level of vetting:	RV	Post Number:	

### B. PURPOSE OF THE POST: *Why the post exists and what it has to achieve*

The Data Scientist will act as a data science expert, identifying opportunities to increase efficiency and effectiveness through the use of innovative analytical techniques. Leading on force wide identification of innovative solutions to complex problems using a variety of data languages and software.

### C. DIMENSIONS OF THE POST *The key statistics associated with the post*

#### Financial – Direct or Non-Direct

Non Direct

#### Staff Responsibilities – Direct or Non-Direct

Non-Direct

#### Any Other Statistical Data

REWARD

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**D. PRINCIPAL ACCOUNTABILITIES:** *What the job is accountable for and required to deliver*

- Lead the application of data science processes and techniques within BTP.
- Application of advanced statistical and analytical techniques to help draw insight from a wide range of data applications including data mining, and supervised and unsupervised machine learning and predictive modelling
- Merge, manage, interrogate and extract data to supply tailored reports to colleagues, customers or the wider organisation
- Communicate the intelligence extracted from this analysis to key stakeholders and customers in a simple way, giving clear recommendations to senior leaders
- Collaborate with key departments such as Technology, Information Management, Systems owners to identify data requirements and implement solutions
- Develop and maintain predictive modelling within BTP that can be used across a variety of data sets such as demand modelling, vulnerability and crime modelling
- Keep up to date on the latest technology, techniques and methods (nationally and internationally) in the data analytics field applying best practise within BTP
- Conduct research and develop prototypes and proof of concepts
- Explore opportunities to use insights/datasets/code/models across other functions in the organisation (for example in the HR and Crime departments)
- Develop and apply algorithms to solve complex data problems
- Work with a variety of data languages to identify efficient ways of presenting and analysing data
- Application of innovation data analytics and data science technology Promote and champion the use of data science across the strategy and performance department and across the force – identifying opportunities to improve processes and products.
- Apply mathematical and computer science concepts to the broader analytics team and inspire the adoption of advanced analytics and data science across the entire organisation
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**E. DECISION MAKING:**

**Make decisions**

**Significant say in decisions**

Key influencer in what new analytics are deployed in BTP to advance data insight and predictive analysis in the force.

- Create data products for senior leaders, officers and staff to increase efficiency and help decision making

**F. CONTACT WITH OTHERS:** *The frequent contacts the post holder has with others and for what purpose*

**Internal**

Extensive liaison with Heads of Department, Police officers and staff

Represent the Strategy and Performance department when necessary at board meetings and internal and external meetings

**External**

British Transport Police Authority (BTPA)

Train Operating Companies and rail industry staff

Rail Delivery Group (RDG)

RSSB

Home Office

Department for Transport (DfT)

National Police Chiefs' Council (NPCC)

Her Majesty's Inspectorate of Constabulary (HMIC)

College of Policing

Universities and other external researchers

**G. REQUIREMENTS:** *The skills, knowledge, experience, qualifications and training required to perform the job.*

**Essential Criteria:**

**Qualifications and Training:**

- Qualified to degree level in numerate discipline e.g. Maths / Statistics / Computer Science / Research

**Experience:**

- Experience of data science techniques such as machine learning, automation and data structures
- Experience in data processing, database programming and data analytics
- Proven ability to identify data solutions that demonstrate enhancement in effectiveness and efficiency
- Excellent pattern recognition and predictive modelling skills
- Experience with programming languages such as Java/Python an asset
- Excellent written and verbal communication skills. Applicants must be able to demonstrate that they have skills in effectively producing a range of reports to a varied audience.

**Skills:**

- Proven experience of using technical solutions to solve complex problems.
- Experience in database interrogation and analysis tools, such as Hadoop, SQL and SAS
- High degree of competence in working with large volumes of data and combining those to gain enhanced insight – both structured and unstructured.
- Drive and the resilience to test new ideas and work with minimal supervision
- Ability to translate complex statistical findings or solutions into simple terms for digestion by key stakeholders.

**Knowledge:**

- Knowledge of Data Science, statistical analysis and data mining.
- Understanding of statistical software packages (e.g. R/ Python)

**Desired Criteria:**

**Qualifications and Training:**

- A postgraduate qualification in a relevant discipline, preferably with a statistical, mathematical or analytical focus.

**Experience:**

- Statistical analysis and algorithm building using large and complex datasets.
- Experience working as a data scientist (or equivalent) in a commercial organisation.
- Experience of Programming

**Skills:**

- Ability to design robust classification algorithms that can meet a business requirement using machine learning techniques

**Knowledge:**

- Knowledge of the wider technology and data developments
- A good understanding of commercial and financial processes within a large organisation.

H. **ANY ADDITIONAL INFORMATION:** *Information relevant to the role, including any particularly challenging/ difficult aspects of the job. If competencies have been developed for this post, these can be listed here.*

I. **AUTHORISATION DETAILS**

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Date: 07/01/2019

Area Commander /FHQ  
HoD: Vanita Patel

Date: 10/01/2019

Evaluation Panel:

Date: 14/01/2019