

# Principal Data Scientist – Analytical Product Development

## Basic information

**Scale:** 3

**Job family:** DDaT

**Terms:** Permanent

**Location:** Cheltenham

**Reports to:** Head of Applied Data Science

**Direct Reports:** N/A

**Team:** Data Products

**Business unit:** Digital & Data

**Date reviewed:** October 2020



## Job purpose:

The Principal Data Scientist will be responsible for providing highly specialist data science capabilities. Working across both data and digital products, you will collaborate with multidisciplinary teams and provide specialist data science skills, knowledge and experience to develop first-class products for our customers and leverage UCAS' valuable data asset.

In collaboration with the Data Product Specialist you will deliver UCAS data products to time, cost and quality. You will champion excellence and professionalism in data science and be the lead in your field within a multidisciplinary digital product environment, leading others without direct authority.

## Key accountabilities:

- As a specialist in data science capabilities, provide technical leadership within agile multidisciplinary teams and be accountable for achieving required outcomes.
- Lead the development of data products, providing technical direction and ensuring the team's decisions and approach aligns to the product roadmap.
- Work collaboratively with the Data Product Specialist to deliver the product roadmap to time, cost and quality.
- Working with the Data Science & Statistics Profession Lead, provide mentoring and coaching to the data product team and work with them to improve skillsets and capabilities.
- Proactively assist in developing the product development vision and strategy.

- Champion agile ways of working and data science professional excellence in an agile environment, leading without authority within a multidisciplinary team.
- Build and maintain an internal and external network of stakeholders.
- Collaborate across scrum teams and the wider business – sharing knowledge and best practice, to ensure seamless delivery to your customers.
- Develop a deep understanding of customer needs, ensuring an excellent customer experience through products and services your team builds. Develop a deep understanding of UCAS' wider business to identify where data can deliver or support solutions to help deliver its strategy.
- Represent the Digital and Data business unit at internal meetings and UCAS at external meetings, as required.
- Deputise for senior management at internal and external engagements where required.
- Ensure technical quality of all data work within your scrum team.
- Ensure that reuse and automation are designed into all products and associated processes.
- Ensure the continuous improvement of individual products and the product development process.
- Act as a role model to your agile multidisciplinary team, the Digital and Data business unit and wider business, upholding UCAS' culture, standards and values.
- Championing your specialism, maintaining your own development in the area as well as upskilling and cross-skilling team members to build a wide-ranging set of analysis skills.

### **Skills, qualifications, and experience:**

#### **Essential**

- Strong experience in an area of Data Science or advanced analytics (e.g. ML, forecasting, data visualisation etc.)
- Demonstrable experience of using data and analytics in product development
- Demonstrable experience of applying advanced analytical techniques to large datasets, e.g.:
  - Using unsupervised ML clustering techniques (such as kmeans and hierarchical clustering algorithms) in order to cluster similarities and/or create segmentations
  - Creating recommendation systems using collaborative filtering techniques
  - Propensity modelling
- Demonstrable experience of leading the deployment and testing of ML models
- Demonstrable experience of fast-paced, agile working environments
- Demonstrable experience of developing and leading a substantive area of work
- Demonstrable experience of using a wide range of statistical methods, data science, or machine learning in manipulating and analysing large datasets to create insights and value
- A natural curiosity about data and the methods to manipulate it, and a drive to innovate using these
- Excellent communication and presentation skills, ability to explain deeply technical insights to a non-technical audience at all levels
- Possess soft skills in order to grow networks internally and externally, to influence and promote the benefits of Data Science to a wider audience
- Extensive knowledge of at least one analytical programming language, such as R, Python or SAS
- Bachelors degree (or higher) in a numerate discipline such as Mathematics, Statistics, Computer Science, Operational Research, Data Science or related field
- Understand the importance of data security and stewardship

#### **Desirable**

- Demonstrable experience in building and implementing statistical models in a commercial environment
- Experience of leading a scrum team and working within a multidisciplinary team environment
- Experience of commercial software and product development

- Masters level degree in a numerate discipline such as Mathematics, Statistics, Computer Science, Operational Research, Data Science or related field.

This role profile sets out the scope and main duties of the post at the date when it was drawn up. Such details may vary from time to time without changing the general character of the post or the level of responsibility entailed. Such variations are a common occurrence and cannot of themselves justify a reconsideration of the level of the post. All UCAS employees are expected to be flexible in undertaking the duties and responsibilities attached to their role and may be asked to perform other duties, which reasonably correspond to the general character of their role and their level of responsibility.

**Our values in action:**

**Customer-focused** – We understand what our customers want, and we act on their changing needs.

**Collaborative** – We collectively create an engaging and positive work environment.

**Accountable** – We take ownership of our individual and organisational performance.

**Service excellence** – We realise, grow, and maximise our potential.

**Trusted** – Individuals are trusted to make informed decisions and take appropriate risks.