



National Student Financial Aid Scheme

Job Specification & Recruiting Profile of Vacancy

23 May 2025

The following vacancy exists at NSFAS in Cape Town.

Position	Data Scientist	Type & Grade	Permanent, D1
Vacancy No	22 of 2025/26	Department & Unit	ICT, Data Management

POSITION OVERVIEW:

Responsible for leveraging advanced statistical and computational techniques to extract insights from complex datasets, to implement data driven solutions to address business challenges.

RESPONSIBILITIES:

AI Research and Development

- Utilise statistical techniques and machine learning algorithms to analyse large datasets and extract actionable insights
- Develop predictive models and algorithms to solve specific business problems such as customer segmentation, demand forecasting and anomaly detection
- Identify patterns, trends and correlations in data to drive strategic decision-making and enhance

business operations

Data Analysis/Automation

- Collect, analyse and interpret large datasets to develop AI models
- Utilise machine learning, natural language processing and other AI methodologies to create predictive models and algorithms
- Ensure the smooth deployment of AI models and monitor their performance
- Continuously evaluate the effectiveness of AI models and systems
- Make adjustments and optimisations based on performance data to improve accuracy and efficiency

Reporting and Documentation

- Create and compile extensive reports, to communicate findings effectively through data visualisation techniques, such as charts, graphs
- Create interactive dashboards and reports for analysis and decision-making
- Responsible for documenting integration processes, configurations and workflows as well as generating reports to track performance metrics, KPIs and compliance with SLAs.

Collaboration and Communication

- Collaborate with cross-functional teams to understand business requirements and ensure AI solutions align with organizational goals
 - Communicate complex AI concepts and the benefits of AI solutions to non-technical stakeholders
 - Collaborate with IT and development teams to integrate AI solutions into existing systems
 - Communicate findings and insights in a clear and understandable manner to stakeholders at
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various levels

Risk and Compliance/AI Ethics

- Implement governance policies and practices to ensure the quality and integrity of data throughout the organisation
- Set standards and procedures for AI definitions, usage and consistency
- Ensure AI solutions comply with legal and ethical standards
- Consider the implications of AI technologies and strive for transparency and fairness in AI applications
- Ensure that AI activities comply with data governance policies, privacy laws and security standards
- Evaluate internal processes for efficiency, problems and inaccuracies

Continuous Learning

- Stay abreast of the latest AI trends, tools and technologies
- Research new methodologies and techniques for potential application within the organisation

DESIRED SKILLS AND EXPERIENCE

Minimum requirements:

- NQF Level 7 in Computer Science, Statistics, Mathematics or related field
 - 8-10 years' experience in the ICT domain
 - Strong skills in programming languages such as Python or R, scala and familiarity relevant libraries and frameworks (e.g. TensorFlow, PyTorch, scikit-learn)
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- Experience with machine learning
 - Solid experience to analyse complex datasets and develop effective AI models, and understand statistics and predictive modelling techniques
 - Experience working with big data technologies (e.g. Hadoop, Spark) and cloud platforms (e.g. AWS, Azure, Google Cloud)

Preferred

- Master's degree in computer science, Statistics or Mathematics
- Advanced certifications in AI or machine learning
- Experience in working Machine Learning
- Project Management Skills
- Knowledge in data modelling, both logical and physical
- Knowledge of key BI trends
- Experience in the higher education sector
- Knowledge of SSIS
- Knowledge of ETL

Skills and Competencies

- Data Mining
 - Business Intelligence
 - Data warehousing
 - Data modelling
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- Strategic and visionary
 - Analytical skills
 - Interpersonal skills
 - Problem solving & decision-making skills.
 - Report writing skills

PLEASE NOTE

Closing date: 08 June 2025

Interested applicants must complete and submit an Employment Application Form available on the NSFAS website. The form must be supported by a detailed Curriculum Vitae which includes amongst other things the vacancy name/position title you are responding to, copies of academic qualifications, Identity Document, and names of three contactable referees. The response must be addressed to the following email address: **jobs@nsfas.org.za**

The NSFAS does not consider late applications. The NSFAS talent acquisition team only corresponds with Shortlisted Candidates. Should you not hear from the NSFAS talent acquisition team within 2 months from the closing date, please consider your application unsuccessful. Appointments will be made in line with the NSFAS Employment Equity goals and targets