**Postdoctoral Fellowship in Data Science and Climate Resilience**

The Schools for Data Science and Computational Thinking, in collaboration with the School for Climate Studies and AgroInformactics Initiative at Stellenbosch University, seeks to fill a postdoctoral position primarily for the "Southern African Trees for Climate Resilience" project.

This interdisciplinary project aims to create a comprehensive data resource on indigenous tree species for reforestation, supporting climate adaptation and mitigation by integrating species traits, climate relationships, and growth characteristics. The research focuses on identifying suitable indigenous species for reforestation, urban afforestation, and climate resilience. It involves managing large datasets from various sources, including remotely sensed data, and applying modelling techniques to study the biogeoclimatic relationships and distribution of these species. Advanced data analysis and machine learning are employed to enhance the predictive accuracy of the models.

**Key Responsibilities:**

* Collaborate on climate resilience projects, including developing reforestation and urban afforestation datasets.
* Data organisation, cleaning, and standardisation from multiple sources.
* Analyse large-scale datasets integrating climate and productivity data and species trait and climate relationship data.
* Application of statistical and machine learning tools for niche and functional trait modelling.
* Contribute to interdisciplinary projects addressing the impacts of climate change on agriculture and ecosystem resilience.
* Development of comprehensive datasets and documentation for open-access sharing.
* The postdoctoral fellow may be required to work on other projects.
* Contribution to teaching and activities of the School.

**Requirements:**

* A PhD in Data Science or a related field requiring modelling of large and/complex datasets (graduated within the last five years).
* Proven experience in data management, statistical analysis, GIS capabilities and machine learning techniques.
* Strong background in ecology, botany, and climate change impacts, with publication success in peer-reviewed journals.
* Proficiency in R and/or Python programming environment and experience with remote sensing data.
* Ability to work independently and collaborate across disciplines.

**Duration:** The fellowship is for one year and, based on performance and funding availability, maycextended to a second year.

**Commencement of Duties:** 1 March 2025

**Application Process:** Send a letter of application accompanied by a comprehensive curriculum vitae, including a list of publications and the names and contact details of at least two referees, for attention to Prof Kanshu Rajaratnam at dataschool@sun.ac.za. Applicants should request their referees to forward confidential reports directly to the same email address by the closing date.

**Closing Date:** 7 February 2025

**Stipend Value:** R380 000 to 420 000. Postdoctoral fellows are not appointed as employees, and their fellowships are awarded tax-free. Therefore, they are not eligible for employee benefits.

**Enquiries:**  Dr Marike Visser: [visserm@sun.ac.za](mailto:visserm@sun.ac.za)

We reserve the right not to appoint anyone to this post.