**The University of KwaZulu-Natal (UKZN) is committed to meeting the objectives of Employment Equity to improve representivity within the Institution.**

**UKZN Big Data for Science and Society (BDSS) Flagship Project**

**POST-DOCTORAL FELLOW (1 POST) (THREE YEAR FIXED TERM APPOINTMENT)**

Based at WESTVILLE/HOWARD COLLEGE/PIETERMARITZBURG CAMPUSES

**UKZN Big Data for Science and Society (BDSS) Flagship Project** seeks to employ a scholar with a strong interdisciplinary/multidisciplinary orientation and specialised Computer Science/Computer Engineering expertise for the position of Post-Doctoral Fellow for a multidisciplinary project on Big Data and Machine Learning funded by the UKZN Flagship Initiative. The **Big Data for Science and Society (BDSS) Flagship Project** is an ambitious project to initiate multi-disciplinary and cross-college collaboration on big data focused research projects for scientific and societal impact.

The applicants need to show a distinct interest and passion to work in a highly interdisciplinary/multidisciplinary/transdisciplinary collaborative environment that cuts across the disciplines of computer science and social science and the human sciences (psychology). Candidates are invited with a strong background in Computer Science and/or Computer Engineering with a particular focus on Artificial Intelligence, Machine Learning and Agent Modelling and must be open to applying these tools/methodologies to the social sciences and Geo-spatial Humanities.

The incumbent should have strong research and writing skills and, ideally, should be published already. The Post-doctoral fellow will work within a team that will seek to develop multi/inter/trans-disciplinary collaborations with the aim of (a) developing novel big data techniques     and (b) broadening the utilisation of big data tools to tackle prospective complex research projects that exist across a wider range of disciplines in the natural and social sciences. These techniques will be applied to existing big datasets and to prospective datasets.  In particular, the team will develop new models and tailored methods in Artificial Intelligence (AI), Machine Learning (ML), Computer Vision (CV), Agent Modelling and Computational social sciences for dealing with big data challenges.

**Specific objectives for this team are:**

- To develop ML, AI and CV and GIS techniques for geo-spatial humanities to study clustering patterns in geo-spatial humanities data and human spatial (GIS) patterns
- To develop agent based simulations for computational social science applications.

Successful applicants will be expected to work with a large team of scholars, postdoctoral fellows and postgraduate students as well as stakeholders from other research institutes.
Applicants are expected:
- To be robustly involved in specific areas and aspects of the Project,
- To offer a termly seminar based on their work
- To engage with a cohort of Masters/Doctoral students
- To research and publish journal articles, book chapters and conference articles in the area of Machine Learning and Big Data, Agent Modelling and the emergent fields of Computational Social Science and Geo Spatial Humanities
- Possibly  assist with proposals and grant applications to undertake cognate funded research;

MINIMUM REQUIREMENTS: POST DOCTORAL FELLOW
- *Applicants need to have completed the PhD no more than 6 years ago.*
- *A detailed recent curriculum Vitae (CV) including a list of publications.*
- *Letter of motivation indicating suitability for position and area of specialization.*
- *Copies of recent academic work authored by the candidate.*
- *At least three confidential referee letters sent directly to Prof Viriri or Prof Tapamo*

Appointments will be three -year contract positions and will be made in line with the University Guidelines/benchmarks which are available on the University Vacancies website. Appointment to this post will be on the January 2018 Conditions of Service. The monthly salary is R15 000 with R 20 000 once off conference travel allowance.

For enquiries kindly write to Prof Serestina Viriri (viriris@ukzn.ac.za) or Prof Jules-R Tapamo (tapamoj@ukzn.ac.za) with the subject line: BDSS Post-Doctoral Fellow Application.
The closing date for receipt of applications is 15 May 2019.