In Conversation with Dr Linda Maoyi

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Dr Molulaqhooa Linda Maoyi
Data Scientist

In this edition of *The SAPRIN Connection*, we chat to Dr Molulaqhooa Linda Maoyi, Data Scientist at SAPRIN. Dr Maoyi talks about his journey from being a television weather anchor to entering the realm of data science – a career he says chose him.

Dr Maoyi obtained his first tertiary qualification, a Bachelor of Science in Computer Science, Ocean and Atmosphere Science from the University of Cape Town (UCT) in 2011. He went on to graduate with three more degrees from UCT viz; an Honours in Computer Science and a Masters and PhD in Environmental and Geographical Science.

He started his career as a TV weather anchor at eNews Channel Africa (eNCA) and went on to become a senior systems engineer at UCT. However, it was during his time at the SAS Institute as a senior technical consultant that he became exposed to the field of data and fell in love with it. The world of modelling, forecasting and using data to make future decisions resonated with him and led to Dr Maoyi applying for the Data Scientist role at SAPRIN.

He recounts how pivoting from a banking and financial services consulting environment to the population studies and medical space, despite his strong data skills had him experiencing some level of imposter syndrome. The former Director and Co-Director of SAPRIN, Dr Kobus Herbst and Professor Mark Collinson reassured him that he would learn as he progressed on the job. He is thankful for their support in advancing his knowledge, which has brought him closer to becoming an expert on population data science.

At SAPRIN, Dr Maoyi's responsibilities encompassed the development and maintenance of the SAPRIN cloud infrastructure, data repository management, and the production of longitudinal harmonised datasets. He played a crucial role in ensuring the adoption of common data quality assurance measures and methods across the network.

In the beginning the nodes were all talking different languages and he was faced with the daunting task of uniting all nodes behind a common language. He describes uniting all the nodes to adhere to one common data model and questionnaire – the harmonisation, as his most significant achievement that he contributed to at SAPRIN.

Dr Maoyi recalls numerous highlights while working at SAPRIN, perhaps the most significant was playing a role in growing SAPRIN from 3 founding nodes to a network of 7 HDSS nodes. He described being involved in establishing the data systems for the four nodes as a rare opportunity that has equipped him with skills that not many people have.

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SAPRIN and the SAMRC gave him great exposure to health research, and he was afforded learning opportunities through SAPRIN and SAMRC. He was able to grow his knowledge base, build connections and work on amazing projects such as MADIVA, PAMHoYA and INSPIRE PEACH. Using his expert knowledge, he was able to contribute positively towards the outcomes of these projects. Serving as a member of the Technical Advisory Panel for the Africa Mental Health Data Prize was a notable achievement and learning experience.

Dr Maoyi speaks with excitement when he talks about the establishment of the Climate Health Working Group. Although in its infancy the group already has a research output which will be submitted for publication soon. The group is the first of its kind in SAPRIN and brings together a diverse range of experts including, scientists, social scientists, demographers and dentists.

"I think that SAPRIN is one of the most comprehensive datasets that you can find that speaks directly to population dynamics at an individual level which has constantly updated observations. This data enables one to really go into the crux of the matter and understand the life course of human beings from birth to death. It is a national asset – gold as a matter of fact. This data we have will be able to inform key decisions for national health planning," emphasised Dr Maoyi.

Building the next generation of data scientists is something Dr Maoyi is passionate about. Capacity building is core to him and this is evident from the employment of two data scientists at SAPRIN during his tenure. He devoted his time and nurtured the interns and helped them grow to the point where Mfundo Khumalo has moved on to AHRI and Augustine Khumalo is working on the PAMHoYA project. His commitment to developing young people is also visible from his supervision of three Masters students at the University of Witwatersrand and one at UCT.

In his role at SAPRIN, Dr Maoyi was able to drive impact for masters and PhD students, both in South Africa and abroad. He found it extremely rewarding that postgraduate students could approach SAPRIN for specialised datasets which he has been able to provide and also support them in their studies. This further illustrated the immense value of the SAPRIN datasets.

His commitment to building skills in the data space was further entrenched in June this year when he presented a module on, "Health & Demographic Surveillance Systems," at the Wits University School of Public Health. The course was directed at students studying towards a MSc in Epidemiology with a focus on Public Health Informatics. The weeklong module used SAPRIN data and gave students access to SAPRIN data for research purposes.

His advice to aspiring data scientists is that they need to have a passion for mathematics and statistics. He encourages them to pursue a degree in mathematics, computer science, or where available data science. A mentor from the data science industry, an internship in a data science programme and industry certifications to validate your knowledge can be invaluable. He also encourages young data scientists to increase their visibility by building their portfolio through entering competitions and building data science solutions based on these competitions and publishing their work on sites such as GitHub. Linda's last piece of advice is to work towards a PhD.

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"It is better to try and fail, than fail to try," is something Linda's father had consistently impressed upon him and he has adopted this as his personal motto. When he is not busy with his data science work, Linda is reading, a wide range of both fiction and non-fiction books. He also enjoys some downtime by indulging in a meal at a nice restaurant.

30 November 2025 was Dr Linda Maoyi's last day at SAPRIN. SAPRIN thanks him for his important contribution in expanding the network and we wish him well as he explores new avenues.

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