

JACQUES CARSTENS

Education | Data Science | Program Analysis | Project Management | Product Development
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In addition to over four years of part-time experience in private and public youth education, I have another 5 years of experience in data analytics/science, including machine learning, cloud computing, programming, project management, and program analysis. I am a multidisciplinary professional rooted in the life sciences with a strong professional background. I am currently changing careers from data science consulting in public health to education, where I am determined to apply my wide experience and expertise to empower the youth with the attitude and aptitude necessary to thrive in demanding academic and professional environments. In my free time I enjoy navigating interesting places with kind and inspiring people.

Professional Experience

JULY 2023 To NOVEMBER 2023

LECTURER, UNIVERSITY OF THE WITWATERSRAND

I was recruited to stand in as lecturer for the Health Analytics term course in the Health Systems Science honours (postgraduate) program in the Faculty of Health Science. In this position I developed and facilitated classroom activities, assignments, and assessments in collaboration with the course coordinator and other staff members.

NOVEMBER 2021 To APRIL 2024

DATA SCIENTIST, PALINDROME DATA

In this position I co-designed, built, and tested machine learning based solutions to public health challenges largely in multiple developing countries. In this role I've grown interested, and somewhat practised, in the 'stakeholder management' role of coordinator of specialist consultants to further develop various technical and non-technical limbs of our team. Specifically,

- Consistently strong performance reviews based on the growing skills in the data science lead role on six phases of cumulative work across three projects totalling \$300,000, supporting on another two phases of another project entering maturity.
- Technical lead in the mid-stage development of a machine learning based healthcare worker job-aid/tool & advising two additional project teams.
- Working closely with a UK based researcher to publish two strategic papers aimed at supporting the development and deployment of incumbent products.

Project Management

- Taking on early support roles to senior project management colleagues on 4 phases of evolving work across two projects contracted for \$250,000.
- Develop at least two static relationships handed-over to me into efficient business conduits and continued opportunities.

- Supporting the adoption and execution of Agile (SCRUM) iteration management processes for two years and counting.

Program Analyst

- Triggered, organised, co-designed, and co-led three rounds of user testing which prioritised in-depth quality feedback user testing of machine learning supported and derived tools, in eight public health clinics.
- Conducting multi-level requirements analyses and validation online and in-person.

APRIL 2021 To NOVEMBER 2021

DATA SCIENCE RESIDENT, PALINDROME DATA

Junior data science position. In this position I applied supervised and unsupervised Machine Learning techniques to public health projects across Kenya, Nigeria, Indonesia, and South Africa in a collaboration with multiple international teams of multidisciplinary professionals across the public and private sectors.

JANUARY 2015 To JANUARY 2019

PRIVATE TUTOR, DATA SCIENCE RESIDENT, TEACHME2, MYACADEMICS, & PRIVATE

I provided tailored academic support to students between the ages of 12 and 18 in various subjects including Afrikaans, English, Advanced Program English, the sciences, and mathematics. By conducting tutoring sessions at the students' homes, I aimed to enhance their academic performance, foster overall proficiency in the subjects, and build enduring educational foundations.

Education

MARCH 2024 TEACHING ENGLISH AS A FOREIGN LANGUAGE (LEVEL 5 TEFL - 168 HOURS), THE TEFL ACADEMY

JANUARY 2021 (LEARNERSHIP) HIGHER CERTIFICATE IN DATA SCIENCE, EXPLORE DATA SCIENCE ACADEMY

MARCH 2020 BSc (APPLIED BIOINFORMATICS & BIOCHEMISTRY), UNIVERSITY OF THE WITWATERSRAND

JANUARY 2016 NATIONAL SENIOR CERTIFICATE, HOËRSKOOI LINDEN (INCLUDING 75% FOR ADVANCED PROGRAM ENGLISH)

JANUARY 2021 AWS CERTIFIED CLOUD PRACTITIONER, AMAZON WEB SERVICES ACADEMY

Publications

JOURNAL OF ACQUIRED IMMUNE DEFICIENCY SYNDROMES, JANUARY 2023

Title: Validation and Improvement of a Machine Learning Model to Predict Interruptions in Antiretroviral Treatment in South Africa (second author)

doi: [10.1097/QAI.0000000000003108](https://doi.org/10.1097/QAI.0000000000003108)

PLOS GLOBAL PUBLIC HEALTH, JANUARY 2023

Title: Historical visit attendance as predictor of treatment interruption in South African HIV patients: Extension of a validated machine learning model (second author)

doi: [10.1371/journal.pgph.0002105](https://doi.org/10.1371/journal.pgph.0002105)

BLOG POST

MACHINE LEARNING IN PUBLIC HEALTH: A PATIENT'S JOURNEY, PUBLISHED IN TOWARDSDATASCIENCE

Article link [here](#)

Volunteer Work

AUGUST 2020 NOVEMBER 2021

CO-FOUNDER, SIZANANI HBCF (NON-PROFIT ORGANISATION)

Sizanani was a registered, youth-run community NPO that worked to drive community development through five main initiatives: Community Gardens, Skills and Training, Mentorship, Culture exchange, and a Feeding Scheme. “Our communities, our responsibilities, our future”.

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