CURRICULUM VITAE

Basic Personal Information

Place of Birth   Malamulele, Limpopo, South Africa
Languages   English, Xitsonga, *most other South African languages*

Career History

Data Scientist at Standard Bank from September 2017 to date

- Junior manager in the Data Science Center of Excellence within Data Services, Group IT. Works in multiple triads either as the principal investigator or to provide critical software and data science support. Facilitates the data science deployment pipeline through CI/CD, testing, refactoring, logging, monitoring and visualisation.
- Current projects are on: anomaly detection, fraud detection.
- Technologies being used: HortonWorks Data Platform (HDP), Elastic Stack (Beats, LogStash, ElasticSearch and Kibana), Anaconda, Atlassian Suite (Bamboo, BitBucket, Confluence, JIRA), Jupyter Notebooks, Bokeh.
- Practice Manager is Mrs Michelle Gervais.

Research Intern at IBM Research Africa from November 2016 to August 2017

- On the Watson Masters and PhD internship. Works as the Principal Investigator for the Retail project within the Digital Urban Ecosystems thematic area.
- Work entails conducting research, developing PoCs, business analysis, project management, filing patents, and formulating business strategies. Assisted with literature review, market research, ideation, and software implementation.
- Areas of focus are IoT, machine learning, cognitive computing and smart cities as they apply to the retail industry.
- Supervisor and Team Lead was Dr Tapiwa Chiwewe.

Master of Science in Electrical and Information Engineering by Research at Wits University since 2016

- Part of Software Engineering Research Group. Research topic: "*Harnessing the Collective Power of a Large Number of Mobile Devices to Form a Networked Computing Cluster to Solve Real Problems*". Keywords: Beowulf, BOINC, cluster, CMake, crowdsourcing, DLIB-ML, HT-Condor, mobile, MOSIX, MPI, OpenMP, volunteer computing, Wi-Fi.
- Attended: CHPC HPC Winter School at NMMU; GPU Computing Workshop at CoE-MaSS (Wits).
- Chief Demonstrator for ELEN4009 at the School of Electrical and Information Engineering (EIE) from February to June 2016; Project Coordinator for COMS3002 at the School of Computer Science and Applied Mathematics (CSAM) from July to November 2016.
- Awarded: SITA UK Scholarship; CHPC National Meeting Student Poster on full scholarship.
- Research Supervisor is Prof Ekow J. Otoo.

Software Developer at ThoughtWorks, Inc. from Apr 2013 to Dec 2015
- Roles assumed: Consultant, QA Developer, Web Developer, Senior Developer, Team Lead.
- Translated Agile Manifesto and Agile Principles into Xitsonga. Published multiple articles on P2 Magazine and ThoughtWorks Insights.
- Key areas of expertise: Application Servers, Continuous Integration and Deployment, Database Management Systems, Extreme Programming, Microservices, Object Oriented Programming, Object Relational Mapping, Package Management, Programming Languages, Software Testing, Systems Integration, Task Management, Version Control, Virtual Environments, Web Frameworks.
- Training at ThoughtWorks University in Pune, India, for 6 weeks; International assignment in Bangalore, India, for 9 months.
- Client projects worked on: DataWinners, Discovery Health, mPedigree, RackSpace.
- General Manager was Mrs Kgomotso Sediane.

Postgraduate Diploma in Mathematical Sciences by Coursework and Mini Dissertation from AIMS and UCT in 2012
- Renamed to Structured Masters in Mathematical Sciences. Research topic: "*Take care of the cents and the rands will take care of themselves*". Keywords: Microcredit, probabilistic counting, continuous interest rates.
- Assignments from: Scientific Computing, Mathematics, Probability and Statistics, Computer Science, Financial Mathematics, Problem Solving in Physics and Mathematics.
- Presented: a mancala gaming app in the Entrepreneurship course; to then German Education and Research Ministry; the paper: Temperature Variations in a Stationary Vehicle. Implemented Pascal's Triangle for Science Hack Day. Built a Genetic Algorithm for a Competitive Programming event.
- Awarded: AIMS Full Scholarship.
- Supervisors were Dr Raouf Ghomrasni and Prof Jeff Sanders.

Bachelor of Science Honours in Computer Science from Wits University in 2011
- Research topic: "*Effect of Metacognition on Time Management during Alpha-Numeric and Audio-Visual e-Learning*". Keywords: metacognition, cognitive science, cognitive theory, time management, completion time, e-learning.
- Areas of study: Research Methodology, Programming, Advanced Databases, High Performance Computing, Applications and Analysis of Algorithms, Artificial Intelligence, Image Processing, Advanced Operating Systems, Data Structures.
- Worked as: Programming Lecturer for the Targeting Talent Program over the holidays; Tutor (FAC, BCO) and Lab Assistant (Python) throughout the year.
- Awarded: NSFAS Postgrad NSF, Postgraduate Bursary Fund, Scarce Skills Scholarship for Honours.
- Supervisor was Mr Angelo Kyrilov.

Higher Diploma in Computer Science from Wits University in 2010
- The Wits BSc (Computer Science) degree, compressed into one year.
- Distinctions: Fundamental Algorithmic Concepts, Operating Systems, Programming Languages.
- Other courses: Application and Analysis of Algorithms, Artificial Intelligence, Basic Computer Organization, Data & Data Structures, Database Fundamentals, Software Engineering.
- Course coordinator was Mr Mike Mchunu.

Technical Consultant at IBM SA Pty Ltd from Jan 2009 to Aug 2010
- Started with IBM Graduate Program for three months before moving to the Software Group business unit as IT Specialist.
- In charge of the Information Management portfolio for the Africa Innovation Center. This included DB2, Optim, InfoSphere and others. Certified for DB2, Optim and InfoSphere.
- Clients worked with: Cincom, Praxis, SARS, Edge Consulting, SDT Financial Software Solutions, EpiUse, Silvermoon, Global Data Logistics, Standard Bank.
- Awarded certificate as one of Top 6 Students at the Dynamic Infrastructure Top Gun. Selected with 5 other graduates to represent all graduates in roundtable with IBM global leaders.
- Mentor was Mr Abri du Plooy.

Bachelor of Science in Computer Science and Statistics from the University of Limpopo between 2006 and 2008
- Main subjects: Computer Science, Mathematical Statistics, Mathematics, Applied Mathematics.
- Awards: Full-tuition Merit Award, 2006; Best Student, Faculties of Commerce, Science and Agriculture, 2006; Eskom Bursary, 2007 and 2008; Computer Science Class Representative; Microsoft Student Partner.
- Worked as Laboratory Assistant during final year.
- Computer Science lecturer was Mr SP Ramalepe.