

MICHAEL VAN NIEKERK

(+27)78 725 8846
Cape Town, South Africa
muzimike@gmail.com

Senior Software Developer

I am a senior software developer with over 6 years of experience who is passionate about writing software for good. I care deeply about writing code that helps ordinary people live better quality lives. In my spare time I enjoy film photography, learning isiXhosa, and running unreasonably long distances.

EDUCATION

Masters in Data, Economics & Development Policy (Economics) , <i>Massachusetts Institute of Technology (MIT)</i>	2022
<i>Econometrics, Political Economy, Machine Learning & AI, Microeconomics, Data Science</i>	
Bachelor of Science (Economics) , <i>University of Cape Town (UCT)</i>	2018
<i>Advanced Micro & Macro, Econometrics, Labour Economics</i>	
TESOL Qualification , <i>University of Witwatersrand Language School (WITS)</i>	2016
Bachelor of Science (Mathematics & Physics) , <i>University of Cape Town (UCT)</i>	2015
<i>Real Analysis, Linear Algebra, Advanced Calculus, Metric Space, Differential Equations, Numerical Methods, Computer Science</i>	

WORK EXPERIENCE

LUMKANI	Nov 2022 — Present
<i>Senior Software Developer</i>	<i>Cape Town, South Africa</i>

- Developed core features using Vue.js/Capacitor for web/app and Django/Python/MySQL for backend
- Introduced operations review with enhanced telemetry and monitoring to improve customer experience
- Transformed our ETL system into a deployable, infrastructure-as-code repository with a QA environment
- Completed a multi-year live migration off of our legacy single table DB design
- Led a cross-team project to reduce time taken to payout insurance claims

EVIDENCE FOR POLICY DESIGN AT HARVARD KENNEDY SCHOOL	Jun 2022 - Aug 2022
<i>Research Intern</i>	<i>Cambridge, Massachusetts</i>

- Wrote a Python CLI tool to automate repetitive, daily high frequency checks on survey responses
- Designed and executed a migration plan to version control all existing code in Github
- Analysed targeting of the Indonesian government's fuel subsidy policy using Stata

AMAZON WEB SERVICES	May 2020 — Nov 2021
<i>Software Developer</i>	<i>Cape Town, South Africa</i>

- Automated (with the team) the migration of ~ 3000 databases from MySQL 5.5 to MySQL 5.7 without downtime
- Improved the success rate of our automated database life-cycle management (Python, Ruby, Bash)
- Audited and subsequently fixed a high severity replication risk that previously caused data inconsistencies
- Credited with ownership of high severity risk which lead to a promotion within 1st year

ACTION APPOINTMENTS	Jan 2020 — Dec 2022
<i>Software Developer (Part time)</i>	<i>Cape Town, South Africa</i>

- Rewrote the back & front end recruitment management system in Django, MySQL, and React
- Provisioned and configured Azure cloud resources (with CD) to host the new system
- Migrated all customer and client data from on-premise server to Azure and Microsoft 365 to ensure 24/7 access

ELECTRUM PAYMENTS	Apr 2018 — Apr 2020
<i>Software Developer</i>	<i>Cape Town, South Africa</i>

- Popularised a RESTful testing framework and paradigm to improve reliability of production code
- Enhanced a banking client's mobile payments service to add new features for over 10 million users
- Redesigned a banking client's user authentication system to a new, robust RESTful Java backend with a MySQL datastore
- Designed and built a new product in Java to allow clients to automate payment reconciliation and settlement

CORE SKILLS

Software	Python, Javascript, Vue.js, AWS, Java, Ruby, SQL, R, Bash, Stata, Git, Docker
Knowledge Systems	Databases, data processing, modelling, econometric analysis
Communication	Public speaking, critical thinking, facilitating workshops, delivering presentations, debate
Languages	English, isiZulu, isiXhosa