SWELIHLE LUCAS

Software Developer | Full-Stack Engineer

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KwaZulu-Natal, South Africa

PROFESSIONAL SUMMARY

Results-driven **Software Developer** with **3+ years of professional experience** in full-stack application development, API design, and database management. Proven track record of delivering scalable software solutions in government and enterprise environments. Strong foundation in **object-oriented programming, RESTful API development, and SQL database design**. Experienced with modern development workflows including **version control (Git), agile methodologies, and system integration**. Quick learner with demonstrated ability to adapt to new technologies and frameworks while maintaining code quality and security standards.

TECHNICAL EXPERTISE

Backend Development

Python, Flask, FastAPI, RESTful API Design, Web API Development, Authentication Systems, JWT Implementation

Frontend Development

JavaScript, React.js, Next.js, HTML5, CSS3, Responsive Web Design, User Interface Development

Database & Data

SQL Server, MySQL, PostgreSQL, Database Design, Query Optimization, Data Integration, Data Validation

Development Tools

Git, Visual Studio Code, Postman, Database Management Tools, Version Control, Code Review

Methodologies

Agile Development, Object-Oriented Programming (OOP), System Design, Testing, Security Implementation

Integration & Cloud

Microsoft Power Platform, API Integration, Automated Workflows, System Migration, Cloud Services

PROFESSIONAL EXPERIENCE

Systems Analyst & Software Developer

October 2021 – Present

KZN Department of Transport

- **Developed enterprise-grade software applications** serving government departments with **3+ years professional development experience**

- **Built scalable RESTful APIs** using Flask framework with comprehensive authentication, data validation, and error handling

- **Designed and implemented SQL Server databases** with optimized queries, stored procedures, and data integrity constraints

- **Created full-stack web applications** with modern JavaScript frameworks and responsive frontend interfaces

- **Delivered 15+ custom applications** including project management systems, election management platforms, and automated reporting tools

- **Integrated multiple systems** using APIs, achieving seamless data flow between legacy and modern applications

- **Implemented secure authentication systems** with JWT tokens, role-based access control, and session management

- **Collaborated in agile development environment** with iterative development, regular stakeholder feedback, and continuous improvement

- **Managed version control** using Git with proper branching strategies and code review processes

- **Automated business workflows** reducing manual processes by 60% and improving operational efficiency by 40%

Network Technician   Sep 2021 – Oct 2021

Telkom (OpenServe)

- ▶ **Maintained telecommunications systems** supporting critical infrastructure and customer services

- ▶ **Performed system diagnostics and troubleshooting** ensuring 99.9% service uptime

- ▶ **Worked with technical documentation** and followed structured maintenance procedures

Data Analyst   March 2021 – Sep 2021

Human Sciences Research Council (HSRC)

- ▶ **Developed data processing systems** for research participant datasets and statistical analysis

- ▶ **Implemented quality assurance protocols** ensuring data accuracy and integrity

- ▶ **Created automated data validation workflows** using Python and Excel analytics

- ▶ **Designed survey systems** improving data capture accuracy by 45%

KEY PROJECTS & ACHIEVEMENTS

◆ Enterprise API Development

Built comprehensive RESTful APIs with secure authentication, data validation, and

◆ Full-Stack Application Portfolio

Delivered multiple web applications with database integration, user management, and real-time data processing capabilities

automated business logic processing using modern backend frameworks

◆ Database Design & Optimization

Designed normalized database schemas with optimized queries serving thousands of concurrent users

◆ System Integration Projects

Successfully integrated legacy systems with modern applications using API-first architecture

EDUCATION & QUALIFICATIONS

BTech in Information Technology

Durban University of Technology | 2019

National Diploma Information Technology

Mangosuthu University of Technology | 2017

National Senior Certificate

Spark Estate Secondary School | 2012

National Certificate: IT Systems Development

NQF Level 5

IBM Mobile Application Developer

Mastery Certification

CORE COMPETENCIES

✓ **3+ Years Professional Software Development**

✓ **Object-Oriented Programming (OOP)**

✓ **RESTful API Design & Implementation**

✓ **SQL Database Development**

✓ **Version Control with Git**

✓ **Agile Development Methodologies**

✓ **Full-Stack Web Development**

✓ **System Integration & Migration**

✓ **Security Implementation**

✓ **Problem-Solving & Documentation**

TECHNOLOGY ADAPTABILITY

Current Expertise: *Python, Flask, React.js, JavaScript, SQL Server*
Learning Approach: *Demonstrated ability to quickly master new technologies based on project requirements. Strong foundational knowledge enables rapid adaptation to .NET Core, C#, Angular, and TypeScript.*

AVAILABILITY

Available for immediate start • Willing to relocate within KwaZulu-Natal region