

Kekeletso Joelle Maleka

Software Engineering / Software Development Intern Candidate

Professional Summary

Final-year Bachelor of Computing (Hons) student specialising in **Software Engineering**, seeking a **Software Development / Software Engineering internship** to complete in-service training. Strong foundation in **object-oriented programming, backend development, databases, web technologies, and machine learning**, with hands-on experience gained through academic and personal projects. Comfortable working in Agile environments, solving complex problems, and learning new technologies quickly.

Key Technical Strengths

Object-Oriented Design | Backend Development | Data-Driven Systems | Software Analysis & Design | Problem Solving

Projects

Student Performance Classification & Prediction System

Python | Scikit-Learn | TensorFlow/Keras | Dash

GitHub: <https://github.com/0101Keke/Student-Performance>

- Built a machine learning classification system to predict student performance using historical academic data
- Designed, implemented, and evaluated **Random Forest** and **Feedforward Neural Network** models
- Integrated the deep learning model into a **Dash web application** to enable user input and probability visualisation
- Performed data preprocessing, feature engineering, and model evaluation to compare performance

Linear Programming & Optimisation Algorithms System

Python | Linear Programming | Algorithm Design | Operations Research

GitHub: <https://github.com/KholdHart/LPR381Proj>

- Designed and implemented a custom algorithmic system to solve **linear programming problems**
- Implemented core optimisation techniques including:
Primal Simplex Method
Branch and Bound (integer programming)

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Education

Expected in 03/2027

Belgium Campus ITversity Tshwane

Pretoria, South Africa

Bachelor of Computing (Honors): Software Engineering

Relevant Modules:

Software Engineering, Software Analysis and Design, Programming (Java, C#, Python), Web Programming, Database Development, Machine Learning & Statistics, Internet of Things, Research Methods, Project Management

12/2022

Hoerskool Ben Viljoen

Groblersdal, South Africa

Matric Certificate

Technical Skills

Programming Languages:

Java, C#, Python, JavaScript, TypeScript

Web & Databases:

HTML5, CSS, SQL, PostgreSQL, MS Access

Cutting Plane Method

Graphical Sensitivity Analysis

- Analysed feasibility, optimality, and constraint sensitivity for optimisation models
- Applied mathematical modelling to real-world constraint-based decision problems
- Strengthened algorithm design, logical reasoning, and computational problem-solving skills

Web-Based Student Wellness & Dashboard System

Java | JSP | Servlets | PostgreSQL | Apache Tomcat

- Developed a web application with **user registration and secure login authentication**
- Implemented a student dashboard displaying academic performance summaries and charts
- Integrated PostgreSQL database using **JDBC** and applied MVC architectural principles
- Focused on maintainability, data integrity, and clean backend logic

AI-Powered Anti-Sleep Glasses (Driver Drowsiness Detection)

ESP32-CAM | IMU Sensor | Machine Learning | IoT

GitHub:

https://github.com/0101Keke/esp32_mpu6050_irsesnormodule_final_intoffulldataflow_dashboardincluded

- Contributed to backend logic and system research for AI-based driver drowsiness detection
- Assisted with integrating sensor data into decision-making logic
- Participated in feasibility analysis, system design, and technical documentation

Object-Oriented Banking System

C# | Object-Oriented Programming

- Designed and implemented a banking system supporting savings and current accounts
- Implemented transfers, service charges, and event-based notifications
- Applied **encapsulation, inheritance, and polymorphism** to ensure scalable design

Experience

Government - Examination Assistant

Polokwane, South Africa

12/2024 - 12/2024

- Supported examination administration in a high-pressure academic environment
- Ensured accuracy, confidentiality, and organisation of examination materials
- Identified discrepancies and collaborated with faculty to resolve issues efficiently

Frameworks, Tools & Platforms:

Git, GitHub, TensorFlow, Keras, Dash, Apache NetBeans, Tomcat, Power BI, Microsoft Excel, Delphi

Erica - Dog Sitter

Groblerdal

06/2021 - 06/2022

- Developed strong communication and responsibility skills through regular client interaction
 - Managed schedules and provided feedback to clients regarding pet care
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Availability

Available for **full-time in-service training from 2026**

Duration: **12 months**