

# CHRISTOS MUHLURI MASHELE

## Full Stack Developer

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## SUMMARY

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Computer Systems Engineering graduate awaiting graduation, with strong hands-on experience as a Full Stack Developer Intern working on live, production-level applications using PHP and the Symfony framework. Actively involved across the full Software Development Life Cycle (SDLC), including requirements analysis, system design, implementation, unit testing, debugging, deployment support, and ongoing system maintenance.

Technically proficient in developing modular, scalable backend systems, building RESTful APIs, implementing MVC architecture, and integrating relational databases using SQL. Experienced in applying object-oriented programming (OOP) principles, clean code practices, and version control using Git in collaborative, Agile-based environments. Comfortable working with HTML, CSS, JavaScript, and server-side technologies to deliver reliable and secure web applications.

Possesses a solid engineering foundation in computer systems architecture, operating systems, networking fundamentals, and embedded systems, with practical exposure to IoT solutions, PLC programming, microcontroller-based systems, and automation logic. Demonstrated ability to troubleshoot hardware and software issues, analyze system performance, and optimize application behavior.

## EDUCATION

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### Diploma in Computer System Engineering, Tshwane University of Technology

- Object-Oriented Design, Algorithm Design, Data Structures, Problem Solving, Complexity Analysis, Software Engineering, Artificial Intelligence, Networking Systems, Databases (SQL), and Operating Systems.
- Gained hands-on experience in programming languages such as C/C++ and Python to develop practical and scalable software solutions.
- Developed strong analytical and problem-solving skills, optimizing algorithms and designing efficient, real-world system solutions.

02/2022 – 06/2026

Pretoria, South Africa

## WORK EXPERIENCE

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### Full Stack (intern), Mfundu Pedia

08/2025 – Present

Sandton, South Africa

- Actively involved in designing and developing live production systems, contributing to both planning and implementation phases.
- Work on backend development using PHP and the Symfony framework, building controllers, services, and business logic that support real users.
- Design, manage, and interact with relational databases (PostgreSQL and MS SQL), including writing queries, managing data relationships, and ensuring data integrity.
- Develop front-end interfaces using HTML, CSS, JavaScript, Twig templates, and Vite, focusing on clean layouts, responsiveness, and usability.
- Integrate front-end components with backend APIs to ensure smooth data flow and system functionality.
- Perform testing, debugging, and issue resolution on live systems, identifying root causes and applying fixes under guidance from senior developers.

- Participate in system improvements and feature enhancements, helping optimize performance and maintainability.
- Collaborate closely with other developers through version control (Git), code reviews, and team discussions.
- Gain real-world exposure to the full software development lifecycle (SDLC), from requirements analysis to deployment and maintenance.
- Document about CRM(Customer Relationship Management) system and draw an architecture diagrams of CRM's.
- Compare different CRM platforms to find solution for debt collection management system and document the findings.
- Building symfony bundles
- Configuring forms and designing workflows for fidelity demo.
- Building bundles for online TAS(Town Application System) which is a project for Coj.
- Use git to commit, pull and push to/from bitbucket repository

## **Skills**

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### **Technical skills**

- PHP (Symfony Framework)
- JavaScript
- HTML5, CSS3, Twig, Vite
- SQL (PostgreSQL, MS SQL)
- Object-Oriented Programming (OOP)
- Full-stack web development
- Backend & frontend integration
- Database design and query optimization
- Git version control
- Software Development Life Cycle (SDLC)
- Basic networking concepts
- Embedded systems (Arduino, PLC, VHDL)
- IoT fundamentals

### **Soft Skills**

- Strong problem-solving skills
- Fast learner and adaptable
- Team collaboration
- Clear written and verbal communication
- Attention to detail
- Time management and organization
- Ability to work under pressure
- Analytical and logical thinking
- Self-motivated with a strong work ethic

## **PROJECTS**

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### **Smart Irrigation system**

Designed and implemented an automated irrigation system using sensors and a microcontroller to monitor soil moisture and control water flow. The system optimizes water usage by activating irrigation only when required, improving efficiency and reducing waste.

### **RFID student Registration system**

Developed an RFID-based system to register and track student attendance. The system reads RFID cards, records data into a database, and allows administrators to view attendance records, improving accuracy and reducing manual processing.

### **Banking Application**

Built a desktop banking application using **Embarcadero C++**. The system supports user account creation, secure login, balance management, deposits, withdrawals, and transaction history, with a strong focus on data validation and system reliability.

### **Automated Solar Tracking System**

Created an automated solar tracking system using a microcontroller and light sensors to adjust the solar panel's position. The system tracks sunlight throughout the day to maximize energy capture and demonstrate renewable energy efficiency concepts.

## **Smart Home Control System (ESP32)**

Developed a smart home system using an ESP32 microcontroller to control household devices wirelessly. The system allows remote switching of lights and appliances, demonstrating IoT communication, automation logic, and real-time device control.

## **CERTIFICATION**

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- Huawei Data Link Layer Network Technology Micro Certificate
- Huawei Cloud Service Computing Micro Certificate
- Sololearn Introduction to C++

## **References**

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Available upon request