

KNEWELL MACHINGURA

CONTROL SYSTEMS | EMBEDDED SYSTEMS ENGINEER

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Summary

A dynamic and results-oriented Systems Engineer with over six years of experience at Unistar Inks in system architecture, software development, and project management. Successfully pioneered a multi-platform manufacturing system using C#, PHP, and Python, resulting in a 30% increase in production management efficiency. A proven leader in optimizing system reliability and an effective communicator with experience in staff training and cross-departmental collaboration.

Experience

UNISTAR INKS | Durban, KwaZulu-Natal

Digital & Industrial Systems Engineer | January 2021 - Present

- Pioneered and implemented a multi-platform manufacturing software (C#, PHP, Python) for real-time process monitoring, increasing production management efficiency by 30%.
- Managed the complete ICT infrastructure across multiple branches, optimizing server performance and network devices.
- Designed and implemented robust system architectures for all production processes.
- Developed an automated data acquisition system that significantly improved product quality during milling processes.
- Utilized MySQL for comprehensive data storage and analysis to enable data-driven decision-making.
- Led project timelines and deliverables for critical system upgrades and enhancements.
- Conducted troubleshooting, regular maintenance, and upgrades on network infrastructure and control boards to ensure peak system performance and reliability.
- Delivered comprehensive operational training to staff on new systems and equipment maintenance procedures.

Electronics Engineer (R&D) | October 2018 - December 2020

- Developed low-cost RFID tags using innovative conductive ink technology.
- Designed and fabricated conductive ink Printed Circuit Boards (PCBs) for various applications, including LED displays and sensors.
- Researched and explored applications for printed electronics in flexible and wearable devices.
- Implemented a complete RFID-based inventory management system for apparel.
- Deployed a fully integrated home automation system utilizing KNX, MQTT, and voice assistant technology.

ZPC KARIBA | Kariba, Zimbabwe

Control & Instrumentation Intern | July 2014 - August 2015

- Performed critical maintenance and upgrades on generators, PLCs, transformers, servers, and industrial chillers.
- Calibrated and verified the accuracy of field instrumentation and control systems to ensure compliance with operational standards.
- Authored technical reports, maintenance logs, and other operational documentation.

Education

Bachelor of Engineering (Honours) in Electronics | 2015

National University of Science and Technology (NUST), Zimbabwe

Skills

- **Programming Languages:** Python, C#, Java, C/C++, PHP, SQL
- **Technical Skills:** Systems Architecture, Software Development, Hardware & Software Design, Automation, Project Management, Equipment Procurement, Technical Documentation
- **Professional Skills:** Effective Communication, Collaboration, Training & Development

Portfolio

<https://www.knewell.online>