

## Tinashe Mutamiri | Software Engineer

RTP, NC, 27560

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### Computer & Technical Skills

PROGRAMMING: Java, C/C++, C#, JavaScript, .NET, Python, SQL, HTML5, CSS3

SOFTWARE: MicroC/OS RTOS, Microsoft SQL Server, Unix/Linux, Visual Studio, DOORS Requirements n. Management, Clearcase/Clearquest, Enterprise Architect (UML), Microsoft Visio/Power Point/Access/Excel/Word

HARDWARE: ARM Cortex-M3, Freescale MPC55xx, Microchip PIC microcontroller

SYSTEMS ANALYSIS AND DESIGN: DFDs, ERDs, UML, Use Cases, Sequence Diagrams, Req Gathering – [Certificate in Business Analysis™ \(ECBA™\)](#)

DATA MANAGEMENT ANALYSIS: SQL Server (SSMS), Dedicated SQL pool, IBM Db2, Azure Synapse Analytics, PowerBI, Tableau, (ETL) Power Query, DAX

### Work Skills Summary:

- Hands-on skills in programming and integrating industrial-grade sensors and transmitters.
- Strong knowledge of Information Systems Architecture.
- 5+ years of experience with embedded systems and industrial sensor/transmitter integration.
- Knowledge of implementing various communication protocols in embedded systems for automation and control environments.
- Proficiency in C/C++ and experience with real-time operating systems (RTOS).
- Practical experience with LevelLimit liquid-level transmitters and Tempsonics linear-position sensor lines.
- Experience in industrial communication protocols: Fieldbus Communication Protocols (CANopen, J1939, Profibus, DeviceNet) and Industrial Ethernet Protocols (EtherNet/IP, PROFINET and EtherCAT)
- Strong skills in debugging, testing, system and specifications verification & validation.

#### *Most recent relevant Experience*

- I have proficiency with source control management techniques including branching, code review, and merging – Git (GitHub, GitLab, and Bitbucket.)
- 6 years experience building and maintaining CI/CD solutions with knowledge in infrastructure, platform configuration and system integration.
- Knowledge of Electrical Architecture, Functional Architecture and Software Architecture.
- Experience with effectively using software configuration management (source control, DevSecOps, CI/CD).
- Ability to work effectively on an agile team following agile practices with Internal Software Design groups, Tier I and Tier II (external suppliers).
- Experience with software operations (Reliability Engineering, observability, support/maintenance).
- Experience in secure coding practices and modern software development methodology, such as pair programming, test-first/test-driven development.
- Proficient with Automation tools (National Instruments Measurement Computing - Data Acquisition and Control & Electronic Test and Instrumentation), understanding and applying industry software quality assurance standards.
- Professional experience on Software / Requirements Verification projects (Test Suite and Automation solutions for multiple Verification/Validation scopes & integration levels).
- Strong understanding of the role of deployment, migration, security, and performance in the continuous delivery lifecycle.

### Current-Role Key Responsibilities Summary:

- Developing and maintaining control software for embedded systems – Designing software solutions in support of production test
- Integrating and configuring different industrial communication protocols including CANbus, PWM, SSI, EtherNet/IP, and EtherCAT.
- Developing automated calibration, signal conditioning, and diagnostics in embedded and industrial systems, assisting Test Engineers with software problems, troubleshooting and analyzing technical problems and recommending solutions.
- Working across mechanical, electrical, and software disciplines to build robust mechatronic test platforms, interacting with other departments as required to provide technical support.
- Utilizing debugging and test tools such as oscilloscopes, logic analyzers, and protocol analyzers for problem solving.
- Preparing detailed technical documentation for system integration and validation procedures.

## Experience

Temposonics, Cary, NC

**Software Engineer – Test Automation** – April 2022 – Present (Full Time)

### Responsibilities

- Creating and maintaining high quality test and programming automation for the manufacturing and testing of Temposonics' sensors.
- Daily support with programming and testing Temposonics sensors using electromechanical systems - protocols: (EtherCAT, EtherNet/IP, PROFIBUS, PROFINET), mobile hydraulics (CANBus, CANOpen, J1939) and safety-relevant systems (SIL, SIL2).
- Partnering with Research & Development, Applications Engineering, Product Managers to design and execute effective product testing strategies, Collaborating with Marketing team to ship products as specified on custom requirements.
- Design control software in C++ and Java for software solutions in support of production testing and verification.
- Design and develop software solutions in support of production test and internal products used by Temposonics Sensors Group Division and Sensors Technology.
- Generate software modules and drivers for smart sensors to be used in product manufacturing.
- Work with Test Engineers on software problems, troubleshooting and analyzing technical problems, recommending possible solutions on electromechanical systems.
- Implement automated measuring and testing firmware for the Level Plus magneto-strictive level transmitter product line.
- Developed Windows PC based configuration software used across Level Plus products.
- Lead in conducting data analysis projects to arrive at data-driven decisions.
- Work with SMEs within the organization and engineers to devise and develop effective and quality solutions providing a best-in-class user experience.
- Design solutions that involve applying automated tests at every layer of the application stack, both inside and outside of the continuous delivery pipeline, utilizing observability and monitoring tools to proactively detect and remediate failures.
- Oversee sensors build and conducting verification testing of customer products and prototype driveline products, performing validation and verification of new features. This also involves creating and implementing tests, primarily in C++, based on definition from product engineering.

### Projects & Experience

- Led the integration of SIL 2-compliant safety features into embedded control systems, enhancing system reliability and meeting industrial functional safety standards.
- Collaborated on the design and implementation of a new detached sensor model from Temposonics, enabling modular system configurations and reducing sensor replacement time in the field.

**Applied skills:** C++ · Java · Software Requirements · Embedded Operating Systems · Verification and Validation (V&V) · Data Analysis · Test Automation (Data Acquisition and Control & Electronic Test and Instrumentation) - *Industrial Communication:* CANbus, PWM, SSI, EtherNet/IP, EtherCAT - *Tools:* Oscilloscopes, Logic Analyzers, Protocol Analyzers, *Embedded Systems:* RTOS, Sensor Integration, Signal Processing

Firstsource, Morrisville, NC

**Data Engineer** March 2020 – March 2022 (Full Time)

### Responsibilities

- I worked as part of the Technical Business Intelligence Team developing data pipelines for Senior Managers and department directors; building tools to analyze Firstsource management, and customer support data, which guides business leadership on optimizing the effectiveness and efficiency of company sales and customer support stakeholders.
- My role involved consulting with business stakeholders to understand how they inform decisions for their teams and lead the development of data models to fulfill analytical, reporting, and operational data needs across these teams.
- Created and analyzed metrics that illustrate the quality of applications and develop insights that drive the direction of quality engineering.
- Responsible for developing and maintaining data pipelines and models that enable self-service analytics solutions.

**Applied Skills:** Data Analysis · Customer Insight · Loan Origination/Servicing · Microsoft Excel · Power BI, Python · SQL · Tableau · Power Query, DAX · SAP BI

Kelly Services, Raleigh NC Remote

**Apple - Technical Support Engineer** – July 2018 – March 2020 (Full Time)

Responsibilities:

- Technical Support - iOS, MacOS and iPadOS.
- Responsible for monitoring Apple Connect for Case Management system and integration to Apple Digital Platform for case reviews, case assignment, Risk Assessment, Case prioritization and Case resolution.

**Applied skills:** Customer Service · Software Troubleshooting · Technical Support

Flint Studio, Denver, CO

**Software Developer** – March 2015 - June 2018

Responsibilities:

- Worked collaboratively with development, product, operations, and support teams to encourage quality as a key design element in all work efforts.
- Worked with the team to promptly triage software failures and bugs with precision and accuracy, maintaining the health of the build pipeline (SDLC).
- Took part in Quality Engineering to protect end-users from escaped software defects, participating in support escalations,
- Designed, modeled, configured, and implemented related process solutions to meet desired business requirements.
- Analyzed business processes and systems processes to recommend improvements using the Flint standard deployment model and processes.
- Managed requirements scope and disposition through process compliance and gap analysis, integration testing and user acceptance methodology.
- Provided knowledge and input on the system implications of business process changes.

**Applied Skills:** UX/UI Design · Specifications Definition · Java · Kotlin · Flutter · Android/iOs/Web/Windows App development · Jira · Jenkins · Python · In Vision · Prototyping · Document Analysis · Requirements Gathering · Android Studio/XCode/IntelliJ/VS Code

## Education: Monash University

BSc. Computer Science (2011 - 2014)

**Professional Objectives:** Targeting a position developing automated testing for real-time embedded software at a local company that makes product-driven embedded software, working in R&D or QA department. I have interests in data structures and algorithms, business data modelling, information systems management, statistics, desktop/mobile/web app development (C++, Java), software engineering, systems analysis, design & development, and human computer interaction.

## Career Highlight

I am a highly motivated analytical and solutions-driven software engineer with a vast background in computer information systems – architecting solutions in manufacturing for processes improvement with Industry 4.0 (IIOT) and Data-driven decision making. I excel at requirements gathering and staying on-top of the software development life cycle, confidently interacting across business and IT functions, understanding business requirements, and translating them to efficient and scalable solutions in an agile manner.

I have a proven track record of working as a trusted engineer in business-analysis and data-analysis efforts for decision making, implementing new relevant digital technologies, and crafting achievable roadmaps.

In the last 5 years, I have worked as a versatile Embedded Systems Engineer for Test Automation with proven expertise in integrating industrial sensors and transmitters, including Temposonics linear position sensors and Liquid Level transmitters. I have honed skills in both firmware development and hardware integration for real-time control systems with my proficiency in Fieldbus Communication Protocols (CANopen, J1939, Profibus, DeviceNet) and Industrial Ethernet Protocols (EtherNet/IP, PROFINET and EtherCAT) I am skilled in sensor calibration, signal processing, and diagnostics for high-reliability applications. I combine deep technical knowledge with practical system-level thinking to deliver robust mechatronic and instrumentation solutions. Experienced in implementing functional safety requirements aligned with SIL 2 standards and working with next-generation detached sensor models for improved system modularity and maintenance.

As a results-driven software engineer with 8+ years of solid experience including a global industrial automation company, an industry leader in mortgage financing, a global B2B e-commerce and integration services company, and experience at Apple Inc – I now have a proven track record of success as an experienced software engineer with experience developing real-time embedded software for electro-mechanical systems, expertise in operational improvements and quality control in highly regulated industries. I am a driven professional with solid strategic planning and time management skills who consistently achieves all business goals, adding revenue and value to core functions, consistently “Exceed Expectations” on all job performance evaluations and metrics.