

Ephrem Sima

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Objective

A highly skilled professional with over 10 years of experience in manufacturing and expertise in CNC operations, production management, and MES (Manufacturing Execution Systems). Recently completed Full-Stack Development certification and currently working as an MES Modeler using Critical Manufacturing Software. Passionate about building efficient software solutions and improving processes through data-driven modeling and full-stack development. Seeking opportunities in software development, MES implementation, or hybrid roles combining both.

Professional Experience

MES Modeler / Manufacturing Process Analyst

Critical Manufacturing Software

September 2024 – Present

- Modeled and configured complex workflows in MES systems to enhance production efficiency and quality.
- Designed and implemented custom data collection forms, checklists, and automated validation logic for manufacturing steps.
- Collaborated with cross-functional teams (IT, Quality, and Operations) to implement MES enhancements and ensure seamless integration with shop floor operations.
- Created user-friendly dashboards and reports for operators, supervisors, and managers using SQL queries and data visualization tools.

Senior Machine Operator

Integer

July 2019 – August 2024

- Operated and maintained advanced manufacturing machinery, adhering to strict production schedules.
- Developed SOPs and provided training to ensure consistent and efficient machine operations.
- Collaborated with engineers to troubleshoot and resolve production challenges, resulting in improved yield rates and reduced downtime.
- Led cross-functional improvement projects that increased production efficiency by 15%.

Full-Stack Developer (Freelance Projects)

Self-Directed

2024 – Present

- Developed responsive web applications using JavaScript, Node.js, React, and Express.
- Designed and managed MySQL and MongoDB databases, ensuring efficient query performance and data integrity.
- Built secure REST APIs for various CRUD operations and integrated third-party services (e.g., Stripe for payments).
- Collaborated with clients to gather requirements and deliver robust, user-friendly applications within deadlines.
- Deployed web applications to cloud platforms such as AWS and Heroku.

Machine Operator

GM Furniture - Ethiopia

May 2016 – June 2018

- Operated CNC machines to manufacture precision components according to technical drawings.
- Verified dimensional accuracy of machined parts using measurement tools and process sheets.
- Implemented machine adjustments and minor maintenance to ensure continuous production.

Machine Operator

Upendo Engineering - Addis Ababa, Ethiopia

March 2014 – April 2016

- Managed daily CNC operations, including program updates and tool changes.
- Optimized machine settings to improve efficiency and accuracy of production runs.
- Ensured all finished products adhered to specifications and quality control standards.

Education & Certifications

Full-Stack Development Certification

Evangadi Tech – Maryland, USA

Completed: December 2024

Certification in Cisco Implementing and Administering Networks

New Horizons Computer Learning Center – Eagan, MN

64 Credits in Electrical & Computer Engineering (No Degree)

Addis Ababa Institute of Technology – Ethiopia (2009-2011)

High School Diploma / GED

Menelik II School – Addis Ababa, Ethiopia (2008)

Technical Skills

Programming & Development:

- JavaScript (Node.js, Express, React), HTML5, CSS3
- MySQL, MongoDB, REST API Development
- Git Version Control, Agile Methodology

Manufacturing & MES:

- MES Workflow Modeling & Configuration (Critical Manufacturing MES)
- Data Collection Forms, Checklist Design, and Automation
- Production Process Optimization, Rework Loops, and Verification

Networking & System Administration:

- Cisco Routing and Switching
- Network Configuration and Troubleshooting

Soft Skills:

- Leadership & Team Collaboration
- Process Improvement & Problem-Solving
- Training & Mentorship

Projects

1. E-Commerce Application (Web Development Project)

- Developed a full-stack e-commerce platform with user authentication, product search, and payment integration using Stripe.
- Backend: Node.js, Express, MongoDB; Frontend: React.
- Deployed on AWS with a CI/CD pipeline.

2. MES Configuration for Production Line Automation

- Created a workflow that automated production rework loops and assembly line checks using Critical Manufacturing MES.
- Implemented real-time data capture and notifications for failed steps, reducing manual intervention by 30%.