

# TYLER GUEST

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## SUMMARY

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Emerging Software Engineer with over 8 years of professional experience in production operations and workflow management. Currently pursuing a B.S. in Computer Science with a focus on Embedded Systems, C/C++ development, and System Architecture. Eager to leverage a strong background in quality control and technical problem-solving to contribute to the development and testing of complex hardware systems.

## EDUCATION

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**University of Michigan - Flint** | B.S. Computer Science (GPA: 3.89)

June 2023 - Dec 2027

- Relevant Coursework: Object-Oriented Programming, Data Structures, Algorithm Analysis, Computer Architecture, Operating Systems, Discrete Structures, Database Design

## TECHNICAL PROJECTS

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**Memory Manager** | C, Linux, Make | [\[source code\]](#)

Sep 2025 - Present

- Developed a custom memory management system in C with strict 8-byte alignment and overflow protection mechanisms.
- Built a comprehensive test suite covering edge cases and boundary checks, using Make for systematic debugging and error verification.
- Implemented data tracking features to monitor heap usage statistics, ensuring the system performed within defined resource limits.

**Service & Inventory Database** | SQL, PL/SQL | [\[source code\]](#)

Sep 2025 - Dec 2025

- Designed a relational database to track the full lifecycle of production jobs (Tickets -> Estimates -> Invoices), ensuring end-to-end traceability of parts and labor.
- Coded complex PL/SQL triggers to automatically deduct inventory and recalculate taxes upon sale, eliminating the risk of manual data entry errors.
- Implemented strict constraints to enforce data integrity, ensuring reliable reporting for stock levels and revenue.

## EXPERIENCE

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**We Can Do It Graphics**

Flint, MI

*Lead Graphic Designer*

May 2015 - Jan 2023

- Led a team of 5 in a high-volume production environment, implementing process improvements that increased throughput while reducing material waste.
- Performed final visual and dimensional inspections on production units, strictly adhering to client specifications.
- Managed the daily operation, calibration, and maintenance of wide-format industrial printing hardware to ensure consistent output quality.
- Utilized Adobe Creative Suite (Illustrator, Photoshop) to configure and validate vector files, verifying dimensional tolerances and file integrity prior to manufacturing.
- Maintained detailed production logs, inventory records, and order specifications to ensure full job tracking and accountability.

## SKILLS

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- Languages: Python, C, C++, SQL
- Software: Ubuntu 24.04, VS Code, Git, Excel, CMake, Valgrind, VMM