

Gavin Breaux

Software Engineer

Contact

Frederick, MD

601-497-0689

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Education

University of Louisiana at

Lafayette

2017-2021

B.S. in Mechanical

Engineering

Skills

Allen Bradley PLC

C# Programming

Machine Networking

Robot Integration

Cognex Machine Vision

Electro-Mechanical Design

SolidWorks

Python

VBA

Office Suite

Certifications

Fundamentals of Engineering

ANSI B11 Safety of Machinery

Projects

Motion Tracking Turret

[github.com/gavinbreaux777/](https://github.com/gavinbreaux777/Cam_Tracking_Pi)

[Cam Tracking Pi](#)

Personal ongoing project to design a system to track motion and fire projectiles, including software, mechanical, and PCB development

Software Engineer

May 2024 – Present

Meso Scale Diagnostics

- Developed and integrated .NET software and Allen Bradley PLCs on new system builds, owning delivery through commissioning across small teams
- Mentored junior PLC developers in best practices and device troubleshooting
- Onboard machines onto OT network and developed system monitoring dashboards for PLC based systems
- Troubleshoot and add features to production PLC and C# based systems
- Built a Git-based source control and code review software suite for PLC ladder logic and led its rollout to production machines
- Took part in developing standardized PLC code architecture, adhering to industry standards
- Participated in mechanical design reviews, providing feedback during testing and deployment of systems

Automation Engineer

January 2022 – May 2024

Meso Scale Diagnostics

- Led application research projects that shaped a department-wide project consuming over 75% of the department's resources
- Rewrote the department's risk-assessment process for machine builds based on ANSI B11 standards
- Standardized device selection for 6-axis robots, PLC controls, and servo/stepper motors on an EtherNet/IP network, improving machine reliability
- Partnered with Lead Mechanical Designers on application testing, CAD design, and concept development
- Built and improved data automation programs for inventory management
- Improved machine vision applications for defect detection and disposition
- Supported manufacturing systems built on PLC-based control

