Michael Girbino

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Objective

Software engineer ready to apply project experience and passion for flexible and maintainable designs to new engineering challenges.

Education

Case Western Reserve University, Cleveland, OH
Master of Science in Systems & Control Engineering: May 2019, **GPA**: 3.67
Bachelor of Science in Electrical Engineering: May 2017, **GPA**: 3.57, **Minor** in Computer Science
Fall 2016 Men's Varsity Cross Country Captain

Experience

V-280 Engineering Manufacturing Development Aircraft • Bell Textron, Inc. July 2020 – Present
Senior Software Engineer – Flight Control Systems

- Co-authoring the software specification for a new flight control computer, which encompasses bootloader, hardware initialization, and operating system features
- Developing and maintaining a software framework for integration tests, incorporating the Abstract Factory and Memento design patterns
- Modified components of our legacy operational flight program to run on a different processor, which provided data that informed the processor chosen for a new flight control computer

V-280 Air Vehicle Concept Demonstrator Aircraft • Bell Textron, Inc. March 2019 – July 2020
Software Engineer – Flight Control Systems

- Designed the telemetry interface used in the autonomy guidance computer
- Identified and documented a latent design error that resulted in a new mitigation procedure in flight test
- Automated the verifications for a suite of manual-review integration tests, which were used in regression testing over the next year of build releases

Internships

Manufacturing Systems • Advanced Manufacturing Technology, Inc. – *Jamestown, NY* Summer 2017

- Created a test bench for optical character recognition in assembly line applications

Control Hardware, Low-Voltage Drives • Rockwell Automation – *Mayfield Heights, OH* Summer 2016

- Executed hardware tests and made design revisions for a switching power supply

Control Firmware, Low-Voltage Drives • Rockwell Automation – *Mayfield Heights, OH* Summer 2015

- Designed a terminal debug interface for peripheral cards in a low-voltage drive product

Master's Thesis

Detecting Voltage Anomalies by Monitoring State Transitions in Voltage Regulation Control Systems

- Designed a finite state machine model of an industrial control system and integrated it with an external power flow application's API
- Developed statistical criteria for detecting replay attacks by logging states in software execution

Proficient Skills

C, C++	Java, Python, C#	Agile, Continuous Integration
Git	UML	