

# Brian Rieder

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## EDUCATION

**MICHIGAN STATE UNIVERSITY** | MS IN COMPUTER SCIENCE | Cumulative GPA: 3.57 / 4.0  
East Lansing, Michigan | Graduation: May 2020 | College of Engineering

**PURDUE UNIVERSITY** | BS IN COMPUTER ENGINEERING | Cumulative GPA: 3.69 / 4.0  
West Lafayette, Indiana | Graduated: May 2017 | College of Engineering | Dean's List (All Semesters)

## EXPERIENCE

### GE AVIATION SYSTEMS | EDISON ENGINEERING DEVELOPMENT PROGRAM TIME-SENSITIVE NETWORKING SWITCH APPLICATION DEVELOPER

January 2020 - Present | Grand Rapids, MI

- Devised a Python-based implementation of IEEE standards for Time-Sensitive Networking (TSN) and Precision Time Protocol (PTP) for use on next-generation avionics switches.
- Created a C-based interface application to expose Broadcom-proprietary embedded API calls to the Linux application level.
- Implemented an inter-process socket framework for UDP-based communication between Python and C applications.

### CIVIL UAS EMBEDDED DEVELOPER & DEVOPS ENGINEER

July 2018 - August 2019 | Grand Rapids, MI

- Developed flight and control law software for embedded application of a civil-application drone autopilot.
- Mined telemetry logs and analyzed flight characteristics of actual flight test data.
- Standardized development platform for a team of UAS developers to eliminate the "works on my machine" problem.
- Created a continuous integration framework utilizing a Gazebo simulation environment for automated testing.

### UI DEVELOPER

July 2017 - July 2018 | Grand Rapids, MI

- Developed and tested the underlying mechanisms for GE's next generation FMS UI features (Ada/VectorCAST).
- Analyzed, verified, and validated formal test procedures and their failures for legacy FMS projects.
- Organized scrum development configuration for task assignment and ran daily progress reporting.

### GE AVIATION SYSTEMS | INFRA-ENGINEERING CO-OP/INTERN

August 2013 - August 2016 (Rotational) | Grand Rapids, MI

### ANALYTICS RESEARCH AND SOLUTIONS ENGINEER

- Generated, validated, and provided datasets to quantify and indicate First Time Yield, Nonconformances, Scrap and Rework, and Out of Box Failures to be reported via Spotfire visualization dashboards.
- Identified issues within Electronics Value Stream sites' data schemas and prescribed solutions that ranged from directly addressing processes to manually compiling reports or PostgreSQL queries to rectify data.

### ADVANCED COMMON MODELING ENVIRONMENT (ACME) WEB DEVELOPER

- Created a web based interface for users to interact with an Enterprise Architect driven database.
- Increased autonomy of data entry processes and diagram creation for customer presentation through use of jQueryUI and yFiles libraries in Javascript.
- Implemented back-end server and database interfacing with PHP and MSSQL to retrieve, update, and delete entries from tables with minimal user interaction.

## SKILLS

### PROGRAMMING

Most Proficient:

C • C++ • Bash • Python • JavaScript/jQuery • PHP • Verilog

Proficient:

Java • MySQL • PostgreSQL • MSSQL • HTML/CSS • Assembly • Ada

Worked With:

Ruby • Matlab • Android •  $\LaTeX$  • Visual Basic • Haskell • Scala • (Emacs) Lisp

### SOFTWARE TOOLS

AWS (Certified Cloud Practitioner) • Git Administration • Docker • Jenkins • JUnit • PyTest • Linux Applications