

SUMMARY

A well-rounded software developer with over 8 years of experience developing and maintaining embedded software solutions for aerospace and automotive customers. Extensive background in the full life-cycle of the software development process including design, development, test, debug, and maintenance.

WORK EXPERIENCE

Embedded Software Engineer at Gentex (May 2012 – present)

Design, implement, test, debug, and maintain embedded software for several rear view mirror products and OEMs.

- Integrated CAN communication, electrochromic dimming, lane departure warning, traffic sign recognition, Smartbeam, and TCP/IP software libraries into customer projects.
- Developed software that interfaces with a third party vision processing module, using the resulting information for internal algorithm development.
- Participated in the development of an OSEK compliant operating system developed for internal projects.
- Developed software to support a new hardware system consisting of a dual core ARM Cortex A9 microcontroller with attached FPGA fabric, used for internal algorithm development and analysis.
 - Ethernet, FPGA programming, watchdog, and SPI microcontroller drivers.
 - Application code to support the processor, the FPGA, and algorithms running on target.
 - Bootloader.
- Developed software to support customer specific CAN communication and diagnostics.
- Developed software to support displaying images and animations on small LCD screens.

Software Project Manager at Gentex (March 2011 – May 2012)

Manage the requirements, development, and test phases of embedded software for several rear view mirror products and OEMs.

- Worked directly with OEMs on project definition, project status, and issue resolution. Travelled to Japan, UK, and Mexico to support these activities.
- Staffed, organized, tracked, and reported status on projects.

Faculty at Calvin College (2010)

- Taught a Circuits Analysis and Electronics lab.

Project Manager at DornerWorks (November 2009 – March 2011)

Manage the requirements, development, and test phases of embedded software for several products and OEMs.

- Worked with customers on defining projects, project status, and issue resolution.
- Managed teams doing DO-178B structural coverage analysis and requirement based testing of several features of a VxWorks Operating System.
- Managed teams doing requirements, development, and testing of software for several small automotive products.
- Staffed, organized, tracked, and reported status on projects.

Technical Lead at DornerWorks (September 2008 - November 2009)

Lead the design, implementation, testing, debugging, and maintenance of embedded software for several products and customers.

- Participated in defining projects, project status, and issue resolution with customers.
- Led a team that developed 1500+ DO-178B Level A requirement based tests for 220+ requirements for a VxWorks Operating System Ethernet driver. Ported the tests to a secondary, cheaper and more available, hardware testing platform.
- Led a team that performed DO-178B Level A verification of 100+ problem reports.

Embedded Systems Engineer at DornerWorks (April 2006 – September 2008)

Design, implement, test, debug, and maintain embedded software.

- Developed a DO-178B Level A compliant hardware support software for a VxWorks Operating System used for flight controls.
- Developed the hardware and software for an electronic fan speed controller and wireless remote control.

Intern at Smiths Industries Aerospace (now GE Aviation) (March 2005 – March 2006)

- Used C, National Instruments TestStand, and LabWindows to write test software.

Technical Skills

Programming Languages

- *Proficient:* C
- *Familiar with:* Ruby, C++, X86/ARM assembly

Education

Bachelor of Science in Computer Science

Florida State University: 2012 – 2015 (expected)

Master of Science in Electrical and Computer Engineering – Digital and Computer Systems

Grand Valley State University: December 2010

Outstanding Graduate Student in Engineering, 2010

Bachelor of Science in Electrical and Computer Engineering

Minor in Mathematics

Calvin College: May 2006