Adrian-James Gevero

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EDUCATION

Rensselaer Polytechnic Institute – Troy, NY
B.S. in Computer and Systems Engineering, Awarded May 2022

GPA: 3.42/4.00
Clubs: Rensselaer Electric Vehicle, Embedded Hardware Club, Engineers Without Borders

PUBLICATIONS

A Gevero, D Rutishauser. **Flash Memory Scrubbing Application for Boot File Preservation of NASA's Descent and Landing Computer**. (GN&C Technology VII - Velocimeters) *AIAA SciTech Forum*. 2022; San Diego, CA. DOI: https://doi.org/10.2514/6.2022-1833

PROFESSIONAL EXPERIENCE

Embedded Software Engineer – **Qualcomm Technologies | San Diego, CA** 07/2022 – Present

- Designed and developed firmware device drivers, in C, as part of the Core SoC Infrastructure team.
- Utilized Lauterbach Trace32 to perform JTAG debugging of software images flashed onto silicon.
- Supported debugging efforts for internal device drivers, such as GPIO interrupts, Clocks, HWIO, etc.
- Performed unit testing on device drivers to ensure robust functionality, while coordinating additional testing with the Core Platform Testing (CPT) team.
- Developed and provided Board Support Package (BSP) firmware for numerous hardware targets.
- Employed Perforce, Git and Docker to interface with codebase, maintain version control, and utilize CI/CD.

Software Engineer Intern – **NASA Johnson Space Center | Houston, TX** 01/2021 – 09/2021

- Conducted research on Error correction codes (ECC) and memory scrubbing methodologies.
- Supported NASA's Safe and Precise Landing - Integrated Capabilities Evolution (SPLICE) Project through contributions to the Descent and Landing Computer (DLC).
- Designed and implemented C application for flash memory scrubbing on the DLC.
- Leveraged the Xilinx Vivado Design Suite to interface with the QSPI NOR flash, Timer, and MicroBlaze soft processor.
- Conducted rigorous unit testing on application to ensure its ability to detect and correct soft-errors in memory.
- Investigated potential of parallelizing and vectorizing SPLICE algorithms using OpenMP and gcc optimizations.
- Developed Python and BASH scripts to automate compilation and perform batch tests with varied input data.
- Quantified runtime, context switch, cache miss, and other performance metrics; Compiled graphs into presentations to team members.
- Authored documentation and research related to flash memory scrubbing application; Published findings to the Journal of Guidance, Navigation, and Control.
- Presented technical paper at the 2022 AIAA SciTech Forum in San Diego, CA.

HONORS

- 2022 AIAA SciTech Technical Paper Presenter
- RIT Computing Medalist
- Dean's Honor List
- IEEE-Eta Kappa Nu (ECSE Honor Society)
- Order of the Engineer
- Leadership Award, RPI

TECHNICAL SKILLS

Languages – **C, C++, Assembly (ARM/x86), BASH, Python, LaTeX**, OpenMP, VHDL, OpenGL, Java

Other – **Linux Command Line, Vim, Git, Perforce, Trace32, GNU Debugger**, STM32CubeIDE, Xilinx Vivado, Docker, Dr. Memory, GNU Make, FreeRTOS, Wireshark, Ghidra, JIRA/Confluence, Microsoft Office