Arman Islam

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Education

Purdue University, College of Engineering | West Lafayette, IN — December 2028
Bachelor of Science in Electrical Engineering (intended) — GPA: 4.00/4.00

Arizona College Prep High School | Chander, AZ — May 2025
High School Diploma — GPA: 4.83 / 4.00

- **Honors:** Summa Cum Laude, Academic Honor Award

Skills

Programming Languages & Frameworks/OS: C++, C, Java, Python, Rust, Swift, Node.js, Linux
Hardware: Microcontrollers, Baremetal Development, Sensor Integration/Calibration, Power Conversion
Tools & Design: Git, AutoCAD, Excel, Blender, Maya, Unreal Engine, Adobe Photoshop
Networking: Firewalls, Switches, Routers, Analyzing Access Points
SCADA: real time monitoring, sensor acquisition, control loops, and data visualization systems

Experience & Involvement

Purdue Undergraduate Rocket Propulsion Laboratory | West Lafayette, IN — August 2025 – Present
Software Engineer

- Assisting in the design for the PCB, and wiring for Biggie-K (500lbf propulsion project)
- Updated P&ID program (analogous to SCADA control systems) for Biggie-K by integrating sensor readings and valve control buttons
- Contributing to data regression systems for propulsion analysis and cross team collaboration
- Developing a real time application to transmit data/visualizations to sub-teams, enabling instantaneous feedback after hotfire tests

Embedded Systems @ Purdue | West Lafayette, IN — August 2025 – Present
Firmware Engineer

- Implementing hardware-in-the-loop test system codesigned with a drone flight controller
- Developed software design for RTOS thread/tasks for input system for microcontroller data input
- Working with Raspberry Pi (Linux), ESP32 microcontroller, and Zephyr RTOS
- Writing code for User Control Read driver, autonomous hover handler, and LIDAR-Lite v4 driver

Arizona State University Cybersecurity Internship | Tempe, AZ — May 2024 – July 2024
Research Intern

- Conducted fuzz/vulnerability testing on the "ebook-convert" tool in Calibre focusing on .azw3 and .mobi6 file types. Additionally tested Jellyfin Media Server, FFMpeg and MPV media player.
- Learned and applied AFL++, Snapchange, GDB, Rust, and C
- Presented findings and learning in a poster session to fellow interns and PhD students
- Gained hands-on experience with Linux kernel and low level debugging in gcov and lcov to inspect application behavior and isolate potential exploitability of Calibre

Projects

Drone Embedded Systems Project | Github Repository (armanislam-07/drone)
STM32F103RB | MPU6050 | Linux | Bare-Metal C

- Implemented bare-metal drivers in C for microcontroller (I2C, PWM (similar to frequency converters theory), GPIO)
- Designed and tested motor driver circuits for brushed DC motors and IMU
- Applied Git for version control and project documentation.
- Utilized AutoCAD to create 3D design models for the drone's first model integration.
- Currently developing an auto-leveling control feature by dynamically adjusting PWM signals for improved drone stability (using the IMU) and finishing the I2C Drivers

Certifications

Cybersecurity Risk and Vulnerability Assessment from the University of Arizona
Google Cybersecurity
ITS Specialist – Java