Frank Laterza

941-223-5298 | franklaterza@gmail.com | franklaterza.com | github.com/franklaterza | linkedin.com/in/laterzafrank
Embedded Software Engineer · UCF Computer Engineering Student

EDUCATION

University of Central Florida   Orlando, FL
Bachelor of Science in Computer Engineering   *Expected Graduation: Dec. 2025*

TECHNICAL SKILLS

Languages: C/C++, Rust, Python, Java, TypeScript, Next.js, VHDL, Verilog, GNU/Linux, Git, OOP, Data Structures
Hardware/Tools: Embedded Systems, FPGA, Eagle CAD, SolidWorks, Fusion 360, Lathe, CNC, Soldering, SMT/THT

EXPERIENCE

Apple   Cupertino, CA
Software Engineer Intern   *May 2025 – Aug. 2025*

-
-
-

NVIDIA   Santa Clara, CA
GPU Firmware Engineer Intern   *May 2024 – Aug. 2024*

- Refactored security key signing software for dynamic metadata parsing allowing clients to securely update firmware images
- Contributed to GPU BIOS firmware build system for stack analysis resulting in prevention of unknown stack overflow errors.
- Released client facing tools exposing I2C event logs and faults to diagnose crashes for enterprise datacenter GPUs.

Micro Aerospace Solutions   Melbourne, FL
Embedded Systems Engineer Contractor   *Jan. 2024 – May 2024*

- Lead software development for NASA funded satellite mission designed to demonstrate lossless cryogenic liquid transfer.
- Leveraged multithreading to design software for flight computer to record scientific measurements and control external hardware.
- Developed software for five-layer embedded stack designed to control all sensors, heaters, and valves, and pressure transducers.
- Implemented secure encryption of mission data integrated with Rocket Lab chassis for mission telemetry.

Eta Space   Rockledge, FL
Embedded Systems Engineer Intern   *June 2023 – Dec. 2024*

- Implemented peripheral SPI routines for intercommunication to orbital flight computer transmitting engineering data.
- Developed crash diagnosis through error traps using I2C routines integrated with external.
- Tested software with static code analysis, custom unit testing, and simulation to ensure flight readiness.

Eta Space   Rockledge, FL
Software Engineer Lead   *June 2023 – Current*

- Lead software development for NASA funded satellite mission designed to demonstrate lossless cryogenic liquid transfer.
- Designed PCB to reprogram software during flight allowing custom software build

University of Central Florida's CREOL College of Optics and Photonics   Orlando, FL
Undergraduate Research Assistant   *Jan. 2023 – May 2023*

- Developed VHDL software for measurement of arrival of photons utilizing FPGA.
- Verified accuracy through simulation using ModelSim, resulting in 4 times the performance using timing techniques.

PROJECTS

S.P.U.D (Custom RISC-V CPU) Aug. 2025

C, MultiSim,

- Customized 5 stage pipeline RISC-V 32bit CPU designed drive 64x64 RGB-LED display and run games written in C
- Designed custom display driver logic using protected ram buffers allocated for colored pixel values for RGB-LED Matrix
- Developed the S.P.U.D SDK for interfacing with hardware and graphics engine. TODO FILL

Dex (Self-Balancing Robot) Dec. 2024

C/C++, Fusion 360, Eagle Cad

- Created an open-source self-balancing robot controlled over Bluetooth using Pico SDK, FreeRTOS Kernel, and BTstack.
- Leveraged multicore real time embedded software using FreeRTOS to process controls, gather sensor data, and drive motors.
- Implemented robust and responsive control system responsible for balancing through a real time feedback loop using gyroscope.
- Designed moduler PCB for microcontroller, gryoscope/accelerometer sensors, motor drivers, debugging, and battery management