Frank Collebrusco

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EDUCATION

B.S. in Electrical & Computer Engineering, University of Texas at Austin

Graduated 05/2025

4.0 GPA | Highest Honors

Courses: Computer Architecture, Operating Systems, Algorithms, Embedded Systems Lab, Data Science Lab, Multicore Computing, Software Lab, Compilers, Computer Graphics

EXPERIENCE

ICT2 BRINGUP ENGINEER......Apple CoreOS – Austin, TX | 07/25 –

• <this is in the future> work on bringup firmware, bootloader, DRAM, as new silicon moves from simulator to emulator to dev board to product

FIRMWARE ENGINEER INTERN......AMD | Epyc CPU team - Austin, TX | 05/24 - 09/24

- Developed embedded firmware for Epyc CPUs in C & a Zephyr RTOS environment
- Contributed 12 PRs and 4000 lines to firmware, the 4th and 3rd most on the team during my tenure
- Improved emulated FW reset time by >90% by debugging re-executability and enforcing in CI
- Implemented system to extract logs from emulated FW memory and save to CI, saving debug time

EMBEDDED FIRMWARE ENGINEER INTERN.....Enphase Energy - Austin, TX | 06/23 - 08/23

- Developed safety critical watchdog modules for relay firmware
- Deployed unit testing suite and wrote tests for firmware repository
- Configured emulator to emulate and test native firmware binary
- Fit in and communicated well with global firmware team

EMBEDDED TEACHER'S ASSISTANT...................University of Texas ECE - Austin, TX | 01/23 - 05/25

- Help students debug their embedded software & hardware (ECE 319K & 445L)
- Earned high reviews from students and was asked to return for multiple semesters

PROJECTS

FLUID SIMULATOR & RENDERER

- Implemented an FFT based 2D fluid flow solver with C++, CUDA and OpenGL
- Wrote the 2D FFTs at the heart of the solver in CUDA to run fast on the GPU
- Created an OpenGL renderer so that the fluid can be visualized and interacted with
- The GitHub page linked above contains visuals, more details, & build instructions

FULL PORTFOLIO

See all my latest work here. I'm always working on something gfx, game dev, embedded, audio, etc.

SKILLS

- C, C++, Java, Python
- OpenGL, GLSL, GLFW
- CUDA
- LLVM
- Concurrency

- Unix Terminal, Bash
- ARM, RISC-V Assembly
- Git
- Zephyr RTOS
- Make, CMake

- Computer Graphics
- Unit Testing
- Embedded Systems
- Debugging
- PCB Design