

# Austin Jones

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**Objective:** Computer Engineering Senior looking for full time position for Jan 2022. Interested in working with Embedded Systems, Operating Systems, IoT, and Networking.

## Skills

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Working Knowledge: POSIX, Xilinx MPSoCs/FPGAs, Petalinux, Intel FPGAs, ARM MCUs  
Professional Languages: C++, C, C#, Python, Shell, VHDL  
Recreational Languages: Rust, Haskell, BF  
Office Skills: Excel, GIMP, Git, Gerrit, Visio, L<sup>A</sup>T<sub>E</sub>X, Markdown, Groff

## Education

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**University of Tennessee Knoxville** Anticipated Graduation: Dec 2021  
Bachelor of Science in COMPUTER ENGINEERING GPA: 4.0/4.0

*Current* | **Engineering Professional Practice Office** - University of Tennessee  
AUG 2019 | *Student Ambassador*  
Assist UT engineering students to improve resumes, interview/inter-personal skills, and overall professional skill. Work with other ambassadors to facilitate networking events and career fairs.

## Work Experience

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*Current* | **Siemens Molecular Imaging** - Knoxville, TN  
JAN 2019 | *Electrical R&D Intern*  
Conduct projects, both individually and collaboratively, to provide value to the ER&D team:

- Utilized a Xilinx MPSoC to test limitations of ARM Core processing vs an FPGA implementation to assess cost reductions.
- Used multiple Raspberry Pis with off the shelf networking hardware to conduct data path tests and compare the bandwidth with current custom hardware solutions.
- Demonstrated validity of new system architecture and presented findings to a large technical audience.
- Work with a team of engineers to write various driver code for a custom Linux image.
- Developed Firmware, Embedded Software, and Application Software for a unit test fixture that is used during production of PET electronics.
- Assist engineers with general tasks (e.g. wiring, testing, Python scripts, documentation).

AUG 2021 | **Garmin International** - Olathe, KS  
MAY 2021 | *Embedded Software Intern*  
Developed code for microcontroller to control power on logic for an unreleased product.

- Utilized MCU to monitor main board status and determine the power state of the board.
- Referenced PCB schematics and MCU documentation to integrate software and hardware.
- Gained significant experience with ARM/STM microcontrollers.

## Personal Projects

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**Smart Mirror** - Python, Raspberry Pi

Built a smart mirror with a monitor and Raspberry Pi behind 2-way glass. Forked a smart mirror repo to add custom features. Fabricated frame and assembled the mirror with friends.

**Light Sign** - Rust, Raspberry Pi, Arduino

Created a light sign that displayed text on an LED sign input from a webserver. Rust application, on Raspberry PI, ran custom webserver and spoke to the Arduino. Custom webserver hosts input page and writes text out over serial. Arduino read in over UART and displayed text on the LED matrix sign.

**Firmware Board Support for custom Keyboard** - C, Zephyr

Added support for the Reviung 39 PCB (custom keyboard) to the ZMK wireless keyboard firmware.

## Interests and Hobbies

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- Raspberry Pi, Arduino, Self-Hosting, IoT Projects, 3D Printing
  - VolHacks, Custom Mechanical Keyboards, Basic Electrical Projects
  - Rock Climbing, Cooking, Specialty Coffee, Digital Art