ERIC TRIMBUR

Computer Engineer

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EXPERIENCE

SOFTWARE DEVELOPMENT INTERN | White Rabbit LLC Summer 2021

- Developed a **graph-based database** in Rust
- Wrote well-documented code with **comprehensive unit and integration testing**
- Created and integrated a **write-ahead log** to maintain database integrity

MANUFACTURING INTERN | IRIS Rover, Carnegie Mellon University Summer 2019

- Investigated the manufacturing and techniques in our **carbon fiber layup** process for the rover's wheels
- Experimented with different CF weaves and configurations and **developed tests to quantify performance**
- **Reduced mass by 80%** while maintaining mechanical performance

TECHNOLOGY INTERN | BNY Mellon Summer 2018

- **Reconciled discrepancies** in application migration lists with contractors during an infrastructure upgrade
- Compiled essential information from product owners for **migrating applications to containers**

EDUCATION

B.S.E. IN COMPUTER ENGINEERING | University of Pittsburgh | 2018 - 2022

Relevant Courses

- Cyber-physical Systems
- **Mechatronic Systems**
- High Performance Computing
- **Embedded Systems Design**

Involvement

- IEEE Student Member
- SOAR (SEDS Chapter) Student Member
- SOAR USLI Payload Lead
- SOAR USLI Chief Engineer

PROJECTS

RUBIK'S CUBE SOLVING ROBOT

- Collaborated on a team of 4 to build a six-axis robot that solves a Rubik's cube in less than 5 seconds
- Designed two PCBs for logic and power supply and milled them using our in-house CNC
- Optimized speed curve using **motor firmware** in **embedded C/C++** resulting in a **19% increase in motor movement** compared to constant speed movement

PLANETARY LANDER

- Led a dynamic team of 15 to develop robotic lander designed for the NASA 2020-2021 USLI completion
- Performed **system design and management** tasks to have team meet deliverable deadlines
- Documented all progress in report packages to NASA and **delivered PDR, CDR, FRR reports**
- Created design requirements for the team and led them in developing and conducting **requirement verification via testing and simulations**

"TRIMBUPHONE" 555 TIMER SYNTHESIZER

- Developed PCB design skills in **Altium Designer**, and **circuit simulation using LTspice**
- Analyzed and verified circuit design using **DMM and oscilloscope**
- Designed and 3D printed custom enclosure in **Fusion 360**

Other Skills

- FPGA Programing, VHDL, Vivado
- KiCad, EagleCAD, Fusion 360
- MATLAB
- Go Programing language
- Git and Github
- HTML/CSS, JavaScript