

Cameron Labbe

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Education

Colorado School of Mines

B.S. IN COMPUTER SCIENCE
GPA: 3.9

Golden, CO

Aug 2019 – May 2022

Work Experience

Optical Engines

SOFTWARE ENGINEER INTERN

- Worked on the Reinventillator project, a RPi IoT based software driven medical ventilator.
- I worked mostly with Python using the PySide 2 and QT for Python packages.
- I worked full-stack during this internship using Agile development.
- As a team we rebuilt the UI and added features such as an alarm system and patient profiles.

Colorado Springs, CO

May 2021 – July 2021

Skills

Programming Languages: Python, C++, Java, C, JavaScript, OCaml

Database Management: MySQL, MariaDB

Front End: HTML, CSS, Streamlit

CI/CD: Git, Git Repos (GitHub, Bitbucket), Workboards (Asana, Jira, YouTrack)

CI/CD: Methodologies (Agile, Kanban), Containerization (Docker), Documentation (Sphinx/Docstrings)

CI/CD: Trunk-based dev, Testing (pytest, JUnit), Git hooks, GitHub actions, Pull requests

Platforms: Linux (Bash/Shell), Windows/WSL, RPi, Arduino, IoT

Projects

Frankenchiller

A FULL STACK IoT SOLUTION THAT MONITORS AND CONTROLS TEMPERATURE CONTROL SYSTEMS. CURRENTLY DEPLOYED IN A BREWERY. ONGOING DEVELOPMENT. MORE DETAILS ON GITHUB.

Python, CI/CD, Database Management, IoT

<https://docs.frankenchiller.com/>

Clue

RECREATED THE BOARD GAME CLUE IN JAVA WITH A HEAVY FOCUS ON UNIT TESTING THROUGH JUNIT.

Java

Foliage Recognition

ANALYSE HIGH DEFINITION IMAGES USING A CONVOLUTIONAL NEURAL NETWORK TO DETERMINE IF FOLIAGE IS PRESENT OR NOT. THE THEORETICAL USE CASE WAS FILTERING WHICH IMAGES THE MARS ROVERS SEND BACK.

Python

Maze Solving Robot

A ROBOT WITH 2 DISTANCE SENSORS AND A CUSTOM SHAFT ENCODER. THIS ROBOT WOULD FIRST EXPLORE A MAZE FOLLOWING THE RIGHT WALL, THEN DO A SECOND TRAVERSAL FOLLOWING THE FASTEST PATH.

C++

Home Security System

A RPi EQUIPPED WITH SENSORS TO DETECT A KNOCK AT THE DOOR, DOOR OPENING, OR WINDOW BREAK-IN.

Python

Sheet Music Practice Software

READ SHEAT MUSIC USING TEMPLATE MATCHING AND PLAY THE SONG BACK AT THE CORRECT PACING SUCH THAT THE USER COULD FOLLOW ALONG.

Python

Awards

2019-2022 **School of Mines Dean's list**, 3.5 GPA or better across all semesters.

School of Mines

2017 **National Merit Scholarship Finalist**, Scored in the top 1% of all 2017 PSAT scores.

NMSF