

# Mitchell Waibel

ALARM.COM C-MAPP FELLOW · GRADUATE STUDENT · COMPUTER SCIENCE

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## Education

### Colorado School of Mines

M.S. IN COMPUTER SCIENCE GPA: 4.0

- Expected graduation: May 2019

### Colorado School of Mines

B.S. IN ENGINEERING PHYSICS GPA: 3.56

- Graduated: May 2017
- Graduated Cum Laude
- National Dean's List - 4 Semesters

## Technical Skills

**Advanced** C++, C, Linux Terminal,  
Python, Java,  $\LaTeX$

**Intermediate** OpenGL, MatLab,  
Android Application

**General** Public speaking,  
technical writing

## Coursework

### GRADUATE

Computer Vision  
Simulation  
Applied Algorithms  
Theory of Computation  
Advanced Computer Architecture  
Game Theory and Networks

### UNDERGRADUATE

Senior Design  
Operating Systems  
Algorithms  
Data Structures  
Software Engineering  
Computer Graphics  
Discrete Mathematics  
Database Management  
Computer Organization  
Mobile Application Development  
Game Development

## Employment

References upon request

### Ricoh USA, Inc.

Boulder, Colorado

IMAGING AND COLOR SCIENCE INTERN

May 2018 — August 2018

- Developed the backend software to capture images in real-time (tested up to 3.6 GB/s) and send it directly to the GPU using C++ and OpenGL.
- Created a GUI in Qt Creator to control the camera and paper drum to save images of various size or stream them to the monitor in real-time.

### SEAKR Engineering

Centennial, Colorado

SOFTWARE ENGINEERING INTERN

May 2017 — August 2017

- Ported a proprietary C++ software package from VxWorks to Linux. The software also moved to a new architecture, which required more rewritten code.
- Installed PetaLinux on the flash memory of a MicroZed development board.

### MasterCraft Truck Equipment, Inc.

Englewood, Colorado

WAREHOUSE WORKER

Summers, 2015 — 2016

- Learned about small scale installation processes.
- Received and processed 2–3 large shipments per day.
- Delivered the finished vehicle to the customer.

## Team Project Experience

### Mobile Application Development

OPENGL ES DEVELOPER

Jan 2018 — May 2018

We worked through the entire process of creating an Android application from scratch using proper design with application fragments and activities. Our app is a Dungeons and Dragons character sheet which allows the user to keep track of their players stats. I focused on the dice-roller that the player can use to roll realistic-looking dice using OpenGL ES.

### Senior Design

C++ PROGRAMMER

August 2016 — May 2017

Lightning creates atmospheric events in the ionosphere, called Elves, that can be observed at the Pierre Auger Observatory in Argentina. I helped develop a set of modules to work with existing modules that take weighted photon position data from a simulation of an Elve and simulate what that would look like in the detectors at the observatory.

## Extracurricular Activity

### C++ Asteroids Clone

PROGRAMMER AND DEVELOPER

May 2017 — PRESENT

In my spare time, I use the SFML library in C++ to build a clone of Asteroids from scratch. Most of the gameplay is implemented, but I'm still working on the menu and other systems. This project as it is can be found on my GitHub page under Corvus Praedo.