**Jacob Knaup**

4190 W Allen Rd. jknaup@asu.edu

Queen Creek, AZ 85142 480-323-5061

**Objective**

I am an innovative Robotics Engineering student with experience conducting research with Unity and C programming, seeking an internship computer vision.

**Education**

BSE, Engineering Robotics (Honors) *Expected: May 2019*

Arizona State University *Cumulative GPA: 4.0*

**Work Experience**

ASU Integrated Design, Engineering, & Analysis Lab *December 2016-Present*

* Write and test real-time robot position and force control code in C
* Simulate physical system using Unity and C# programming
* Create interactive model of robot using Unity

ASU University Academic Success Programs *January 2016-Present*

* Communicate calculus and physics concepts and problem-solving methods to students
* Schedule and lead Supplemental Instruction review sessions in calculus and physics

STAX 3D Printing, LLC *February 2016-February 2017*

* Work with R&D team to develop educational STEM products, workshops, and materials
* Communicate 3D printing services to potential clients and provide recommendations

**Academic Projects**

Embedded Systems Design Project *Fall 2017*

* Program microcontroller in C following software planned in a state chart
* Communicate project requirements, features, and technical design during design review

Robotic Systems Pick and Place Manipulator *Fall 2017*

* Write background and color subtraction object location scripts using Python & OpenCV

Laser Tag Robots *Spring 2017*

* Program robots in C to communicate over Bluetooth and IR
* Develop android app in Java to allow user to control and receive feedback from robots

**Volunteer Service & Extracurriculars**

Mentor of Campo Verde High School’s Robotics team

* Suggest design changes, provide feedback, and assist in debugging code
* Volunteer at local competitions as referee and robot inspector

Barrett Honors Writing Colloquium

* Tutor students in writing using Socratic questioning
* Meet with colloquium to discuss paper tutoring and evaluation methods

**Technical Skills**

Programming (C, C#, Python, MATLAB), Microsoft Office, OpenCV, Unity, Solidworks,