**Jacob Knaup**

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**Objective**

I am a dedicated Robotics Engineering student with experience conducting research with Unity and a variety of programming languages, seeking an internship in computer vision and robotics.

**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*

* Develop, test, and evaluate robot position and force control code in C
* Model and simulate physical systems using Unity, Visual Studio, Python, and MATLAB

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 scripts to locate objects using OpenCV

Laser Tag Robots *Spring 2017*

* Program robots in C to communicate over Bluetooth and IR, using third-party libraries
* Develop android app in Java to allow user to control and receive feedback from robots

**Relevant Coursework**

Robotic Systems I, Applied Linear Algebra, Embedded Systems

**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

* Communicate recommendations to improve students’ writing during tutoring sessions
* Meet with colloquium to discuss paper tutoring and evaluation methods

**Technical Skills**

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