**Jacob Knaup**

4190 W Allen Rd. jknaup@asu.edu

Queen Creek, AZ 85142 480-323-5061

**Objective**

I am a motivated Robotics Engineering student with experience designing, programming, testing and evaluating robotic systems, seeking an internship in automation 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*

* Program and test robotic position and force control software in C
* Model robotic systems using C#, Python, and MATLAB
* Devise experimental setups, test robotic systems’ performance, and analyze results

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*

* Define project requirements and criteria and devise diverse solution concepts
* Architect software using state chart and develop software accordingly in C
* Communicate project requirements, features, and technical design during design review
* Test and troubleshoot embedded system using benchtop electrical tools

Robotic Systems Pick and Place Manipulator *Fall 2017*

* Program object detection scripts using OpenCV and Python
* Program manipulator to move to specified coordinates using inverse kinematics
* Test and troubleshoot pick and place manipulator

**Volunteer Service & Extracurriculars**

Mentor of Campo Verde High School’s Robotics team

* Suggest design changes, provide feedback, and assist in debugging code

Barrett Honors Writing Colloquium

* Communicate recommendations to improve students’ writing during tutoring sessions

**Technical Skills**

Programming (C, C#, Python, MATLAB), Microsoft Office, CAD (Solidworks, Autodesk)