**Jacob Knaup**

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**Objective**

I am a motivated, detail-oriented Robotics Engineering student with experience conducting research in the design of robotics systems, seeking an internship in 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*

* Design robotic mechanisms using Solidworks and CAM software
* Model and simulate physical systems using Python and MATLAB
* Test and evaluate robotic systems using Python

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*

* Communicate project requirements, features, and technical design during design review

Robotic Systems Pick and Place Manipulator *Fall 2017*

* Utilize transformation matrices and OpenCV to locate objects
* Program manipulator to move to specified coordinates using inverse kinematics

**Relevant Coursework**

Robotic Systems I, Applied Linear Algebra, Modern Differential Equations, Statics & Dynamics, Vector Mechanics & Vibrations

**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, Python, MATLAB), Microsoft Office (Word, Excel), CAD (Solidworks, Autodesk)