

## **PERSONAL INFORMATION**

Applicant ID: 1000278803

Prefix:

First Name: Jacob

Middle Name:

Last Name: Knaup

Suffix:

Previous Last Name 1:

Previous Last Name 2:

ORCID Identifier:

### **Mailing Address**

Street Address: 4190 W Allen Rd

City: Queen Creek

State: AZ

Zip Code: 85142

Country: United States

E-mail: jacob@knaup.tk

Phone Number: 4803235061

### **Permanent Address**

Same as mailing address: Y

### **Date of Birth**

Date of Birth: 09/29/1996

State: AZ

Country: United States

Citizenship: US Citizen

If permanent resident alien, date status was granted:

### **High School Location**

City: Gilbert

State: AZ

Country: United States

### **Demographic Information**

Gender: Male

Veteran Status: No

Ethnicity: Not Hispanic or Not Latino

Race: White

Disability: No

## EDUCATION AND WORK EXPERIENCE

List colleges or universities attended and your enrollment details.

| College/Univ.            | Location                 | Start Date | End Date | Degree Granting Program | Degree | Degree Cmpl.                  | Grad. Date | Field of Study                           | Cum. GPA | GPA Basis |
|--------------------------|--------------------------|------------|----------|-------------------------|--------|-------------------------------|------------|--|----------|-----------|
| Arizona State University | TEMPE, AZ, United States | 08/2015    | 05/2019  | Yes                     | BS     | No, still enrolled in program |            | Engineering - other (specify) - Robotics | 4.0      | 4.0       |

List teaching and work experiences relevant to your field of study since entering college/university. Experiences do not have to be limited to the academic realm.

| Title                           | Institution/Organization                              | Start Date | Other Experience Ongoing | End Date |
|---------------------------------|---|------------|--------------------------|----------|
| Undergraduate Researcher        | ASU Integrating Design, Engineering, and Analysis Lab | 12/2016    | Yes                      |          |
| Software Engineering Intern     | Benchmark Electronics                                 | 05/2018    | Yes                      |          |
| Supplemental Instruction Leader | ASU University Academic Success Programs              | 01/2016    | No                       | 05/2018  |

List any significant academic honors, fellowships, scholarships, publications and presentations.

National Merit Scholar, Fulton Undergraduate Research Initiative stipend recipient and poster presenter (Spring 2017, Fall 2017), KEEN Research stipend recipient and poster presenter (Spring 2018), Southwest Robotics Symposium poster presenter, Barrett the Honors College (2015-present), Dean's List (2015-present), Grand Challenge Scholar's Program (2015-present)

Baccalaureate Institution: Arizona State University

Current Institution: Arizona State University

Are you or have you been in a joint baccalaureate-master's degree program? No

## PROPOSED FIELD OF STUDY

Field of Study: Comp/IS/Eng - Robotics and Computer Vision

Is your proposed graduate study interdisciplinary? No

## PROPOSED GRADUATE STUDY

Proposed University or College: University of Colorado at Boulder

Proposed Graduate Program: Computer Science

City: Boulder

State: CO

Country: United States

## REFERENCES

List names and organizational affiliations of individuals submitting Letters of Reference (at least three reference letters must be received by the published deadline for the application to be complete).

| Last Name | First Name | MI | Organization             | E-mail Address          | Ref. Rank | Status      |
|-----------|------------|----|--------------------------|-------------------------|-----------|-------------|
| Jordan    | Shawn      |    | Arizona State University | ssjorda1@asu.edu        | 3         | Unsubmitted |
| Aukes     | Dan        |    | Arizona State University | danaukes@asu.edu        | 1         | Unsubmitted |
| Martin    | Thomas     |    | Arizona State University | Thomas.W.Martin@asu.edu | 2         | Unsubmitted |

## PERSONAL, RELEVANT BACKGROUND AND FUTURE GOALS STATEMENT

Please outline your educational and professional development plans and career goals. How do you envision graduate school preparing you for a career that allows you to contribute to expanding scientific understanding as well as broadly benefit society?

Describe your personal, educational and/or professional experiences that motivate your decision to pursue advanced study in science, technology, engineering or mathematics (STEM). Include specific examples of any research and/or professional activities in which you have participated. Present a concise description of the activities, highlight the results and discuss how these activities have prepared you to seek a graduate degree. Specify your role in the activity including the extent to which you worked independently and/or as part of a team. Describe the contributions of your activity to advancing knowledge in STEM fields as well as the potential for broader societal impacts (See Solicitation, Section VI, for more information about Broader Impacts).

NSF Fellows are expected to become globally engaged knowledge experts and leaders who can contribute significantly to research, education, and innovations in science and engineering. The purpose of this essay is to demonstrate your potential to satisfy this requirement. Your ideas and examples do not have to be confined necessarily to the discipline that you have chosen to pursue.

If you have completed more than one academic year in a graduate degree-granting program or a graduate or professional degree, followed by an interruption of at least two consecutive years, please address the reasons for the interruption in graduate study here.

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## GRADUATE RESEARCH PLAN STATEMENT

Present an original research topic that you would like to pursue in graduate school. Describe the research idea, your general approach, as well as any unique resources that may be needed for accomplishing the research goal (i.e., access to national facilities or collections, collaborations, overseas work, etc.) You may choose to include important literature citations. Address the potential of the research to advance knowledge and understanding within science as well as the potential for broader impacts on society. The research discussed must be in a field listed in the Solicitation (Section X, Fields of Study).

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### Proposed Research Title

The title should be brief, informative, scientifically or technically valid, intelligible to a scientifically or technically literate reader, and suitable for use in the public press. It should describe in succinct terms your proposed research, reflecting the contents of your proposal. Use key words, and do not use abbreviations and chemical formulas (in 255 characters or less). This title will be used for searching research topics using the key words you supply. Do not use curly brackets, {}, in your Proposed Research Title or Key Words.

Proposed Research Title: Developing an Interactive Mechanism Design and Simulation Tool using Virtual Reality

Use key words to describe the Graduate Research Plan Statement (in 50 characters or less).

Key Words: virtual reality, simulation, CAD, education

### NSF GRFP PROGRAM INFORMATION

Select the level that most appropriately describes your stage of study at the GRFP application deadline. All enrollment in graduate or professional degree-granting programs must be included.

**You have not previously enrolled in a graduate degree-granting program**, but plan to start graduate study next fall. Includes

- \* **Undergraduate** in the final year of a bachelor's degree program
- \* **Individual who previously earned a bachelor's degree**
- \* **Student in joint bachelor's-master's degree program** who has not yet received the joint degree

### Advisor

If you are currently enrolled in graduate school (levels 2 or 3), provide the name(s) of your current or potential graduate research advisor(s). If you do not have a current or potential graduate research advisor, provide the contact information of your graduate program director. Entry of at least one advisor is required with a maximum of three.

| First Name | MI | Last Name | E-mail Address |
|------------|----|-----------|----------------|
|------------|----|-----------|----------------|

NSF publishes the names, the baccalaureate and current institutions, and the fields of study of Fellowship recipients and Honorable Mention List on FastLane.

Do you wish your name to be published on the Honorable Mention List, posted at <https://www.fastlane.nsf.gov/grfp/>: Yes