

# Jason Dekarske

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## Education:

### **University of California-Davis**

September 2018 - 2023

- Ph.D. Mechanical and Aerospace Engineering, Research focus: Mechatronics and Control Systems
- TA – ENG 102, Dynamics

### **University of Wisconsin-Madison**

May 2018

- B.S. Biomedical Engineering, GPA: 3.5 Technical elective: Biomechanics, Certificate (minor): Biology

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## Engineering Experience:

### **Ottobock Healthcare**

June 2018 – September 2018

#### *Research and Development Intern*

- Analyzed gap in commercial and academic active prosthetic foot solutions
- Designed testbed foot for exploration using Solidworks
- Optimized design using a Monte Carlo technique in MatLab
- Conducted kinematic and quasi-static analyses on proposed design
- Sourced parts and submitted technical drawings

### **UW B.A.D.G.E.R. Lab**

February 2016 – September 2018

#### *Biomechatronics, Assistive Devices, Gait Engineering and Rehabilitation*

- Set up and support \$20,000 motion capture/force plate system using custom MatLab scripts
- Designed and fabricated cutting-edge testing apparatus for trans-tibial prostheses
- Developed hardware and software for custom 450mm quadcopter and 6 DOF robot arm for UW Robotics courses
- Designed custom digital filter for processing pressure insole gait trials

### **Biomedical Design Course**

Spring 2015 – May 2018

- Designed novel ankle-foot active weightlifting prosthesis
  - Coded Android app with real-time prosthesis control and feedback
  - Modeled ideal squat form to apply correct prosthesis torque profile
  - Tong BME Design award: 2<sup>nd</sup> Place. Tech B2B competition: 3<sup>rd</sup> Place.
- Designed and fabricated Passive, articulating prosthetic finger

### **UW-Stout Research Experience for Undergraduates**

Summer 2016

- Developed open-source wheelchair navigation device
- Presented at BMES annual conference/article in review

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## Technical Skills:

Solidworks	Python	Git	Altium Designer/Eagle	Raspberry Pi (Linux)
MatLab/Simulink	LabView	Arduino	Lathe, Mill certified	HTML/CSS

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## Awards:

Dean's Honor List  
Kohler Foundation Incentive Scholarship

## Activities:

UW Rugby Club  
Special Olympics (Volunteer)

Denn-Kroeff Scholarship

Adaptive Adventures (Volunteer)