

# THOMAS GEVEKE

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## EDUCATION

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**Pennsylvania State University** – University Park, PA

September 2018 - December 2022

*B.S. Mechanical Engineering*

- Minor in Engineering Leadership Development
- GPA 3.82 / 4.0

## WORK EXPERIENCE

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**Pennsylvania State University** – University Park, PA

February – September 2022

*Undergraduate Researcher, CAIS Lab*

- Developed robotic code and data infrastructure to support communication and add intelligent, real time sensing capabilities to the robotic system.
- Integrated RGB-D camera and developed grasp detection algorithms for pick and place with complex parts.

**iRobot** – Bedford, MA

May – August 2022

*Automation Hardware Intern*

- Lead projects to design and build electromechanical fixtures for component and system level testing.
- Mentored new interns, assigned tasks, and provided training for best practices for mechanical designs.
- Applied best programming practices for mechatronic control systems using C++ with microcontrollers.

**iRobot** – Bedford, MA

September – December 2021

*Automation Hardware Co-Op*

- Designed, rapid prototyped, and delivered mechanical components for use in automated test fixtures.
  - Used PTC Creo to model and various 3D printing technologies to create iterative designs for electronics housing and sensor mounting components.
- Architected electrical and software systems for test data acquisition to impact product design.
- Applied design for manufacturability principles and assisted in fabrication of machined components.
- Collaborated on complex projects using input and design reviews from team members.

**Moog Inc. Aircraft Group** – East Aurora, NY

January – April 2021

*Engineering Intern, Advanced Technology*

- Conducted market research of augmented reality (AR) in industrial applications through testing and documenting use of emerging headset technologies.
  - Attended conferences, met with suppliers, and tested 3<sup>rd</sup> party products.
- Applied relevant data to determine business justifications and potential return on investment for developing an electrical inspection Convolutional Neural Network (CNN).
- Communicated findings and outcomes to project stakeholders in presentations and demos.

**USDA Agricultural Research Service** – Wyndmoor, PA

June – August 2019

*Summer Intern*

- Assisted a team of engineers with tasks including 3D modeling, traditional and additive manufacturing, and machine failure diagnosis.
- Collaborated side-by-side with diverse teams including scientists and engineers.

## SKILLS

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- **Programming:** Python, MATLAB, C++, ROS, OOP, Linux scripting, Git
- **CAD:** SOLIDWORKS, Siemens NX, PTC Creo
- **Microsoft Office:** Excel, PowerPoint, Word, Project
- **Other:** Microcontrollers – Arduino and Raspberry Pi, robotics, mechatronics, 3D printing, machining, Jira, Confluence, project management

## PROJECTS

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- Designed a system to draw inputted images on an Etch-A-Sketch using MATLAB, an Arduino, and stepper motors. Included software development, electronics, and mechanical design of components.
- Developed a Python program to analyze uploaded university transcripts using OCR and provide scheduling recommendations based on the student's intended major and graduation requirements.