



# Thomas (TJ) Watson

Staff Mechanical / Robotics Engineer

## Details

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Pittsburgh PA, 15201, USA

## Profile

Experienced mechanical engineer with a specialty in electromechanical systems, like robotics, computing systems, and sensors. I have over 5 years of experience in the Autonomous Vehicle space, combining team-building leadership with dedicated drive and deep engineering expertise. My robotics background allows me to bridge diverse, cross-functional groups to solve complex problems. What can I do to help you?

## Employment History

### Staff Hardware Engineer at Aurora Innovation, Inc (Pittsburgh, PA)

January 2021 - Present

I am the technical lead for Aurora's first self-driving computer after the merger with Uber's ATG team. We designed the thermal and structural protections for the automotive computer system. I am also the technical lead for Aurora's first production computer system, an ongoing program.

### Senior Autonomy Hardware Engineer at Uber Advanced Technologies Group (Pittsburgh, PA)

December 2015 - January 2021

I was the technical lead for UATG's Self-Driving computer module. I was responsible for the thermal and structural design of the module, working with Software, Electrical design, systems design, safety, and many other teams to define the product and manufacture it for Uber's Self-Driving vehicles.

### Hardware Intern at Uber Advanced Technologies Center (Pittsburgh, PA)

Fall 2015

### Lab Associate at Disney Research (Pittsburgh, PA)

Summer 2015

### Robotics Intern at Boston Engineering (Waltham, MA)

Summer 2014

### Intern at Oak Ridge National Laboratory (Oak Ridge, TN)

Summer 2012 & 2013

## Education

### Bachelor of Science in Robotics Engineering (Worcester Polytechnic Institute)

### Bachelor of Science in Mechanical Engineering (Worcester Polytechnic Institute)

August 2011 - May 2015

For my senior project, I worked as a mechanical engineer on a 5-student team designing an award-winning amphibious search and discovery robot known as the WALRUS Rover.

## Links

- <https://www.tjwatson.net>
- <https://github.com/roboTJ101>
- [LinkedIn: /tj-watson](#)

## Skills

### Leadership & Teamwork

### Computer Aided Design:

- Solidworks
- Catia V6

### Physics Simulation:

- Solidworks Simulation
- Ansys Mechanical

### Prototyping:

- Manual & CNC Machines
- FDM, SLA, DMLS 3D-Printing
- Most shop tools

### Programming:

- Embedded C / C++
- Python

## ★ Patents

### "Vehicle Computing System Cooling Systems"

August 2021

**20210244738, 20210247739, 20220019194**

### "Methods, Devices, and Systems For Communicating Autonomous-Vehicle Status"

July 2019

**20190221058**

### "Modular Vehicle Computing System Cooling Systems"

June 2019

**20190171258**

### "Lidar Display Systems and Methods"

October 2018

**20180292916**