

# Kurt Waage

Tokyo, Japan

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## Work Experience

### Woven by Toyota

Tokyo, Japan

RESEARCH ENGINEER

May 2022 - Nov. 2023

- Researched, developed, and integrated software and hardware XR capability for selected autonomous vehicles
  - Self-taught Unreal Engine, Unity, C# to fulfill the needs of the project
  - Developed API, Protocol Buffers v3 and Websockets, for connecting the autonomous system with external applications, such as Unity or Unreal Engine
  - Designed hardware fixtures and integrated an external PC and XR components into an autonomous vehicle
- Developed software and hardware triggers for emergency stop functionality of the autonomous vehicles
  - Provided on-site field support during testing, and conducted bug scrubs after testing
  - Participated in design reviews for internal stakeholders

### Toyota Research Institute

Cambridge, MA | Tokyo, Japan

SYSTEMS INTEGRATION ENGINEER

Oct. 2018 - May 2022

- Co-lead two separate vehicle fleet builds totaling 19 completed autonomous vehicles
- Documented and reported issues to relevant teams in Japan and USA, participated in followup bug scrubbing, and was responsible for implementing and verifying identified fixes
- Trained team members within the Japan branch on how best to conduct vehicle builds, retrofits, maintenance, and troubleshooting
- Managed contractor workflow for vehicle builds

VEHICLE SUPPORT ENGINEER

- Chosen, as 1 of a 6 person team, to report to support Toyota's involvement in the Japan 2020 Olympics as a system integration co-lead
- Responsible for vehicle builds, retrofits, and field support for a fleet size of more than 10 vehicles
- Started an initiative for 'how-to' documents related vehicle build, retrofits, and troubleshooting

### Northeastern University

Boston, MA

RESEARCH ASSISTANT

Nov. 2016 - Jan. 2018

- Robotics and Intelligent Vehicles Research (RIVeR) Laboratory
- Researched underwater robotics and monocular, optical flow based navigation and perception

### Orbital ATK

Layton, UT

MANUFACTURING ENGINEER

Aug. 2015 - Apr. 2016

- Mechanical engineer assigned to the Airbus A350 project

### US Army

Germany

SERGEANT – SECTION LEADER

Sept. 2005 - Feb. 2010

- Honorably discharged from the US Army Infantry as Sergeant (E-5) with two deployments to Iraq
- Mentored junior enlisted on topics related to career, training, and personal matters
- Taught Military Operations in Urban Terrain (MOUT) to foreign and domestic groups of platoon size or larger

## Education

### Northeastern University

Boston, MA

M.Sc. IN MECHANICAL ENGINEERING

2016 - 2018

- Gordon Institute of Engineering Leadership fellow
- Concentration in Mechatronics

### Colorado State University

Fort Collins, CO

B.S. IN MECHANICAL ENGINEERING AND ENGINEERING SCIENCE

2011 - 2015

- Minor in Mathematics
- Space Concentration

## Skills

C++, C#, Unreal Engine, Unity, Protocol Buffers v3, Websockets

Version Control, Debugging, Extended Reality (XR), Virtual Reality (VR), Mixed Reality (AR), Training