

EDUCATION

- **Brigham Young University** Provo, Utah
Bachelor of Science in Mechanical Engineering; GPA: 3.89 Aug. 2011 – April 2018
 - **Minors:** Computer Science, Math
 - **Relevant Classes:** Deep Learning, Robotics, Control Systems, Algorithm Design & Analysis, Advanced Programming Concepts, Data Structures, Discrete Data, Dynamic Modeling, Mechatronics, Integrated Product Design

LEADERSHIP/PROJECTS

- **Association for Unmanned Vehicle Systems International** Provo, Utah
Computer Vision Developer Sept 2015 - June 2017
 - **Tensorflow:** TensorFlow is an open source software library for numerical computation using data flow graphs. It is primarily used for training deep learning models. Implemented tensorflow to track and classify targets for an Unmanned Aerial Vehicle search and rescue mission.
 - **Technology Used:** Python, Tensorflow, C++, OpenCV, ROS
- **Personal Research Project** Provo, Utah
GPS-Denied Autopilot July 2017 - Present
 - **Deep Learning:** Researched and implemented deep learning algorithms for GPS-denied autopilots. Specifically researched loss functions to fit our application.
 - **Funding Proposals:** Wrote proposals for getting undergraduate funding through BYU library, Office of Research and Creative Activities, etc. Outcome is to write a research paper.
 - **Technology Used:** Tensorflow, C++, OpenCV, ROS, LaTeX
- **Mars Rover University Challenge** Provo, Utah
Autonomous Navigation Developer Aug 2017 - Present
 - **Visual Tracking:** Researched innovative navigation and tracking software such as semi-direct visual odometry (SVO) and simultaneous localization and mapping (SLAM).
 - **Task Lead:** Currently organizing efforts to make rover completely autonomous, complete with accurate rover position estimations and obstacle avoidance.
 - **Technology Used:** ROS, Python, C++, OpenCV

EXPERIENCE

- **Brigham Young University** Provo, Utah
Research Assistant Aug 2016 - Present
 - **Computer Vision Applications:** Developed vibrational mode shape identification software using machine learning as well as other computer vision techniques.
 - **Research Paper:** Currently writing a research paper with graduate student. Invite to present at a conference.
 - **Technology Used:** Python, Tensorflow
- **SpotterRF** Orem, Utah
Software Engineering Intern Jan 2016 - Aug 2016
 - **Radar Testing Software:** Rewrote testing software to be desirable and transferable to the needs of manufacturing.
 - **Technology Used:** Python, HTML/CSS, Javascript, MongoDB, CouchDB

PROGRAMMING SKILLS

- **Languages:** Python, C++, C#, Java, SQL, Matlab, Javascript
- **Technologies:** Tensorflow, ROS, OpenCV, GitHub, Linux