

# Gavin Martin

me@gavincmartin.com  
(713) 805-8729  
www.gavincmartin.com

## Education

**The University of Texas at Austin**  
B.S., Aerospace Engineering Honors  
Concentration: Space Flight  
Expected Dec 2019 | GPA: 3.84

## Skills

**Languages:** Python • Java • Go • MATLAB • Bash  
**Libraries:** NumPy • SciPy • Pandas • OpenCV • TensorFlow  
**Technologies:** Linux • Git • Docker • Jenkins • AWS •  $\LaTeX$   
**Interpersonal:** Public Speaking • Project Management

## Work Experience

**Raytheon (Contracted to NASA JPL), Software Systems Engineer**, Remote ..... Apr 2019 - May 2019

**NASA Jet Propulsion Laboratory, Mission Planning Intern**, Pasadena, CA ..... May 2018 - Aug 2018

- Optimized Europa Clipper mission modeling and simulation software for speed, scalability, and reliability
- Automated mission simulation, downstream analysis, and data delivery using Jenkins and Docker
- Built dynamic, interactive 3D visualization tool for science instrument coverage maps on Europa's surface

**Texas Spacecraft Laboratory, Seeker Vision Project Manager**, Austin, TX ..... Oct 2017 - May 2018

- Designed computer vision system for NASA JSC's Seeker mission (launched April 2019 on Cygnus NG-11)
- Trained neural networks with TensorFlow to intelligently detect, recognize, and localize nearby vehicles in space
- Validated robust, high-speed performance on embedded systems via hardware-in-the-loop simulations

**Texas Spacecraft Laboratory, ARMADILLO Mission Manager**, Austin, TX ..... Mar 2017 - Nov 2017

- Constructed operations infrastructure to support the ARMADILLO CubeSat (launching Summer 2019 on STP-2)
- Integrated communication and project management platforms while scaling from 5 to 50+ engineers
- Spearheaded development of Python GUI to process and interpret downlinked spacecraft telemetry in real-time

**GE Aviation, Software Engineering Intern**, San Marcos, TX ..... May 2016 - Aug 2016

- Built custom enterprise resource planning software using Java's Swing framework
- Automated customer service reporting by integrating custom ERP software with the Apache POI API
- Value-stream mapped facility's repair station to identify areas for efficiency improvement

## Projects

**ADCS Simulator** – [bit.ly/adcs-simulator](http://bit.ly/adcs-simulator)

- Developed object-oriented simulation engine for spacecraft attitude determination and control systems
- Wrote research paper detailing models for dynamics, actuators, sensors, and control algorithms in simulator
- Tools: Python, NumPy, SciPy, Matplotlib,  $\LaTeX$

**Object Detection Models** – [bit.ly/detection-models](http://bit.ly/detection-models)

- Developed library for easily deploying TensorFlow Object Detection API models and detecting objects in images
- Tools: Python, TensorFlow, Jupyter

**Rotor Control Service** – [bit.ly/rotor-control-service](http://bit.ly/rotor-control-service)

- Designed RESTful microservice for automated ground station tracking of overhead satellites
- Created Slack bot for notifying spacecraft operators of daily & imminent communications passes
- Tools: Golang, MongoDB, Docker Compose, Slack API

## Honors & Awards

**UT-Austin Engineering Honors Program** ..... 2015 - Present

**General Electric Above & Beyond Bronze Award** ..... 2016

**National Merit Scholar** ..... 2015

**4th Place | Public Forum Debate | National Speech and Debate Association National Tournament** ..... 2014