

# Gavin Martin

(713) 805-8729 | [me@gavincmartin.com](mailto:me@gavincmartin.com) | [linkedin.com/in/gavincmartin](https://www.linkedin.com/in/gavincmartin) | [github.com/gavincmartin](https://github.com/gavincmartin)

## EXPERIENCE

---

### Amazon - Project Kuiper

Redmond, WA

*Senior Software Development Engineer / Manager, Constellation Management*

*Apr 2024 – Dec 2024*

- Managed the Constellation Management and Mission Planning software team (10 direct reports) in delivering key planning and scheduling capabilities for automated constellation operations and space safety
- Hired software engineers, applied scientists, and flight operators for Kuiper (participating in 30+ interview loops)
- Built platform for customers to define activities which may be automatically planned and executed on satellites

*Software Development Engineer, Mission Operations*

*May 2022 – Apr 2024*

- Architected and led implementation of a service for managing the lifecycles of satellites and orchestrating their automated progression through key mission phases
- Built Jupyter-based procedure authoring and execution platform and mission operations Python library for use in on-orbit spacecraft operations and ground testing
- Co-created a hardware-in-the-loop test framework to support low-level functional tests, system-level integration tests, and mission rehearsals on satellite testbeds
- Developed serverless automated test reporting pipeline and QuickSight dashboards to process and serve data from across Kuiper to test engineers, SDEs, and program management
- Operated Kuiper satellites as a flight controller through key launch and early operations phases

### NASA Jet Propulsion Laboratory

Pasadena, CA

*Software Systems Engineer, Europa Clipper*

*Jan 2020 – Apr 2022*

- Led the Activity Planning Software development team (10 engineers) in delivering software to support automated activity scheduling, resource simulation, and constraint-checking workflows for the Europa Clipper mission
- Designed and implemented models of several spacecraft subsystems and instruments for use in planning software
- Received 6 NASA/JPL awards (3 team, 3 individual) for achievements in technical excellence and innovation

*Software Systems Engineering Intern, AMMOS (contracted via Raytheon)*

*Apr 2019 – Dec 2019*

- Collaborated in designing a Java-based multi-mission framework for modeling spacecraft activities and subsystems
- Developed a generic discrete event simulation engine for predicting the impacts of activity plans on spacecraft state

*Mission Planning Intern, Europa Clipper*

*May 2018 – Aug 2018*

- Migrated >16-hour-long mission simulation, analysis, and data delivery workflows from local compute to parallelizable cloud-based CI pipelines with Docker and Jenkins
- Created interactive 3D visualization tool for overlaying per-flyby and cumulative science instrument coverage maps on Europa's surface using Google Earth and Python

### Texas Spacecraft Laboratory, UT-Austin

Austin, TX

*Project Manager, Seeker Vision*

*Oct 2017 – May 2018*

- Designed embedded computer vision system for use on NASA's Seeker-1 CubeSat mission
- Directed 15 student development team through successful NASA technical reviews and flight software delivery
- Trained neural networks to intelligently detect, recognize, and localize a nearby spacecraft with >95% accuracy at >1 Hz in a compute-constrained space environment

## SKILLS

---

**Languages:** *Proficient* - Java, Python | *Familiar* - TypeScript, Go (Golang), SQL, C++, Bash, MATLAB

**AWS:** CDK, Lambda, API Gateway, DynamoDB, SNS, SQS, S3, EventBridge, SageMaker, Glue, Athena, QuickSight

**Libraries:** JUnit, Guava, Dagger, Jupyter, Pytest, NumPy, SciPy, Matplotlib, Pandas, SPICE, OpenCV

**Developer Tooling:** Git, Docker, Jenkins, Gradle, Poetry, CodeCommit, CodeBuild, MacOS, Linux

**Aerospace:** Modeling & Simulation, Mission Operations, Spacecraft Systems, Automated Planning, Flight-Like Testing

**Soft Skills:** Public Speaking, Technical Leadership, Technical Writing, Project Management, Mentorship

## EDUCATION

---

### The University of Texas at Austin

Austin, TX

*Bachelor of Science in Aerospace Engineering*

*Dec 2019*

*Engineering Honors Program | GPA: 3.8*