Miguel A. Lopez

480.358.8634 • malope67@asu.edu • miguel.l.business@gmail.com • LinkedIn

EDUCATION

B.S.E, Aerospace Engineering - Astronautics May 2025
Arizona State University, Tempe, AZ

M.S., Aerospace Engineering - Robotics and Autonomous Systems August 2025–Present
Arizona State University, Tempe, AZ

TECHNICAL SKILLS

Software: C, C++, Linux, Git, Visual Studio, Neovim, MATLAB, IBM Rational DOORS
Hardware: Microcontrollers, Soldering (SMD)
Design/Modeling: KiCAD, MATLAB/Simulink, SolidWorks, CREO, ANSYS

EXPERIENCE

Raytheon - Collins Aerospace: Project Engineering Intern, Systems Engineering May 2024–Present

- Responsible for compiling and validating requirements through different system levels and trace them in DOORS
- Responsible for leading team meetings to determine project responsibilities and release of testing specifications
- Created mark-ups to qualification test reports and ensuring they have been reviewed by leadership for release
- Used root cause corrective analyses to investigate product defects during scheduled overhaul to prevent escapes
- Inspected specification control drawings to identify parts in general assemblies that were used for unintended purpose
- Participated in the production of standard work documents that overview high-level

Arizona State University: System Dynamics and Control Teaching Assistant August 2023–May 2025

- Aid during lecture activities and supplement student learning during practice problems
- Responsible for holding weekly office hours to answer student questions and concerns regarding control theory
- Responsible for grading weekly student submissions including homework, exams, and exam corrections

Arizona State University: Rigid Body Statics Teaching Assistant August 2022–December 2022

- Provided support to the professor by conducting tutorial sessions and assisting with class administration
- Explained complex engineering principles in a clear and concise manner to students during office hours

PROJECTS

NASA 2025 RASC-AL Finalist - Project DIANA: Lunar Maintenance Robot August 2025–Present

- Team Lead to a group of 9 engineering students, responsible for overseeing meeting agendas, tasks, and deadlines
- Designed a small maintenance and servicing lunar robot to work in junction with NASA's Artemis program
- Appointed sub-leadership roles and delegated responsibilities within the team to remain on schedule with deliverables
- Responsible for design choices in Command & Data Handling and Guidance, Navigation, & Control sub-systems
- Consulted with experts in the field regarding RF technology to work in junction with GNC LiDAR capabilities
- Responsible for obtaining funding through Viasat and ASU faculty for the fabrication of DIANA prototype
- Selected as one of 14 teams to present before NASA system engineers in Cocoa Beach, Florida

SEDS: Flight Computer September 2024–Present

- Developed an avionics system to determine vehicle pose, velocity, and altitude to be stored locally until descent
- Writing of spacial algorithms and extended Kalman fltering to improve attitude estimation
- Selected SMT parts including barometric pressure sensor, ARM M4 microcontroller, IMU + gyroscope, and altimeter
- Implemented hardware abstraction layer (HAL) to establish serial communications and peripheral sensors

EXTRACURRICULAR/CLUBS

Team Lead, Project DIANA - NASA Finalist Team August 2024–Present

Avionics Lead, SEDS Rocketry Division August 2022–February 2024

Plumbing and Avionics Team Member, Sun Devil Rocketry September 2022–December 2023