

Robert Rodriguez

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(925)-858-8222 | Livermore, Ca

I am an aerospace engineer that is interested in satellite systems and aerodynamics, and I am most interested in python development and software automation.

EDUCATION

Arizona State University, SEMTE

Graduated: December 2021

Bachelor's Degree in Aerospace Engineering

EXPERIENCE

TOPCON Positioning Systems | Test Automation Engineer

January 2022 - Current

- Analyzed GNSS data, focusing on GGA messages and NMEA2K, to visualize atmospheric conditions and positioning offsets. Utilized dual-band GNSS for determining ionospheric delay in receivers. Developed a heatmap to represent ionospheric disturbances, leveraging data from multiple field-deployed receivers.
- Helped maintain an internal software used for GNSS receiver testing. Used PyQt and git extensively during maintenance. Also was responsible for creating and adding new features.
- Tested positioning and auto-driving tractor systems. Wrote detailed reports regarding testing procedure, methods, and results using data collected during the experiments.
- Managed data engineering interns and specialized in debugging both real problems and coding related problems from my own or their codes.

Crystal Communications | 3D Modeling Contractor

June 2021 – July 2021

- Modeled in Solidworks to create replacement parts for handheld radios.
- Used Solidworks assembly feature to build and present parts to the customer.

Space Tourism Aircraft Project | Mission Operations Lead

August 2021 - December 2021

- Lead the mission operations team while working on a takeoff and landing capable aircraft which can reach altitudes greater than 100km using both jet and rocket propulsion.
- Focused on running trade studies which told me the ideal flight conditions of the aircraft (e.g., cruising altitude, cruise Mach number, angle of attack upon atmospheric reentry).
- Utilized MATLAB, Excel and ModelCenter for data analysis. Used an aircraft stability modeler and VBA based mission performance code to create the data.

TECHNICAL SKILLS

Programming: VBA, SQL (1yr) | Python (3yrs) | MATLAB (5+yrs)

CAD: Solidworks (FEA), AutoCAD, Ansys (Fluent) (2yrs) | Solidworks (5+yrs)

Operating Systems: Linux, Raspberry Pi (2yrs) | Windows (5+yrs)

Microsoft Office: PowerPoint, Teams (3yrs) | Word, Excel (5+yrs)

Fabrication: Hand/Power Tools, Prototyping, Designing (5+yrs)

References Available Upon Request