Basil Aranda

Sylmar, CA. 91342 | basil.aranda123@gmail.com | (818) 356-3764 | thymetravel.github.io

Work Experience

Lockheed Martin Skunk Works   **August 2023 - Present**
Manufacturing Engineer

· Root Cause Analysis and corrective action during aircraft assembly, disassembly, and flight verification maximizing first-time-right principles
· Design and manufacture tooling for advanced aeronautical systems including ailerons, empennage, and aft body assemblies
· Compiled and verified program tooling records using data science saving millions of dollars in lost efficiency and improving just in time manufacturing

Aerojet Rocketdyne   **May 2022 – August 2022**
Project & Component Engineering Intern

· Designed Liquid Divert and Attitude Thruster Control System manifold, valves, and injector for Interceptor Program
· Improved process efficiency of Manufacturing Bill of Materials creation by over 99.6% utilizing advanced data science
· Created Qualification and Acceptance standards utilizing strict SMC and AIAA requirements for testing and flight readiness
· Presented feasibility research and results to industry-leading subject matter experts on both thruster and injector assemblies

NASA Armstrong Flight Research Center   **January 2022 – May 2022**
Controls System Engineering Intern

· Developed electromechanical interface and flight control system for human sized quadcopters
· Modeled and simulated flight controllers and high power motors using control system fundamentals and novel integration
· Worked with and designed PWM-based motors with transient disturbances and damping
· Designed Matlab SIMULINK model and library that will be used between NASA centers

NASA Stennis Office of STEM Engagement   **August 2021 – December 2021**
Program & Planning Intern

· Designed on-site experience for future NASA NCAS Scholars focusing on competitive time-limited engineering challenges
· Project will be adopted at other NASA Centers for their specific NCAS programs exhibiting great modularity

Santa Clarita Community College District   **June 2019 – June 2020**
Student Trustee

· Elected by peers to represent 30,000 students as the sole student representative on the SCCCD Board of Trustees
· Introduced sweeping legislation towards environmental sustainability
· Orchestrated & led student marches and demonstrations for justice, accountability, and progress

Education

California State Polytechnic University, Pomona   **May 2023**
B.S. Aerospace Engineering, Astronomy Minor   **GPA: 3.76**

Skills & Abilities

Practical: Root Cause Analysis, Avionics Design and Integration, PCB Design, Program Management, Component Integration
Software: Python, C++, MATlAB, C, SolidWorks, CREO, Fusion 360, Altium, Microsoft Office Suite, Adobe Premiere
Industrial: Project Development, Systems Engineering, Technical Writing, Manufacturing Design, Controls Engineering

Publications

Aranda, Basil P., et al. **"Design of Dual Mars Ascent Vehicle MAVERICK."** *American Institute of Aeronautics and Astronautics* AIAA 2023-4779, 2023, https://doi.org/10.2514/6.2023-4779.