# AVIATION CAMP ASSISTANT

## Profile

Highly motivated and results-oriented individual seeking an internship as an Aerospace Engineer at Northrop Grumman. Special interests include Unmanned Aerial Vehicles, Aeronautical Development and Design, Structural Analysis, and in related areas inside a competitive environment where I will use my experience to best serve the needs of the company.

## Skills

MATLAB, AVL, C Programming, Microsoft Word, Microsoft Excel, Microsoft PowerPoint

## Professional Experience

**Company Name October 2013 to Current**

- Collaborating with others to meet mission requirements and accomplish objectives provided by the Northrop Grumman aerospace company.
- Part of the Unmanned Aerial Vehicle Simulations Team constructing models of the UAVs in order to obtain important aerodynamic properties to perform flight test simulations.
- Worked directly with the UAVs to take accurate measurements in order to model it.
- Designed accurate aerodynamic models of the UAVs using the program AVL, a program for the aerodynamic and flight-dynamic analysis of rigid aircraft of arbitrary configuration.
- Modeled all lifting surfaces, control surfaces, and fuselage.
- Created data and run files of mass properties corresponding with each UAV.
- Executed the run files for each UAV in order to obtain a full linearization of the aerodynamic model about any flight state with specified mass properties.
- Extracted stability-axis derivatives that will be imported into the flight simulation program, FlightGear, to model the simulated plane to have the same flight characteristics and behaviors as the UAVS.

**Company Name October 2013 to Current**

- Collaborating with a team to design and construct an aircraft that will be competing at the SAE Aero Design West.
- Sanded the balsa wood wings smooth for the preparation of carbon fiber wrapping.
- Prepared the epoxy resin mixture for application.
- Wrapped the leading edge, wing spars, fuselage molds, and fuselage walls with carbon fiber.
- Sawed and drill cutted fuselage components.
- Aeronautics F-22 Project Winter 2014 Performed as Team Leader for a team of four for the experimentation and analysis of flight dynamics and parameters of Lockheed Martin's F-22 Raptor Implemented low-speed wind and water tunnel testing using test models to obtain and investigate flight dynamics and performance characteristics.
- Analyzed the flow vortices over the wing at varying velocities at increasing angles of attacks.
- Calculated and observed the relationship and importance of the effect of Reynold's numbers on aerodynamic coefficients.
- Compiled a technical report detailing the results of the calculations and observations, and compared the accuracy of wind/water tunnel testing to theoretical F-22 characteristics.

**Company Name May 2013 to Current Aviation Camp Assistant**
City , State

- Assist children in building and flying model aircraft, launch rockets, complete flight simulation missions, and conduct flight-related science experiments.
- Assist in teaching course lessons based on aviation, air, and space topics Organize and prepare lesson materials and work directly with instructors during hands-on projects and activities.
- Supervise elementary school-aged campers during sign-in, sign-out, and break times.
- Supervised field trips to aviation-related locations.
- Work with a team comprised of diverse instructors, assistants, and volunteers to provide children an educational and unforgettable experience.

**Company Name August 2012 to January 2013 Guest Experiences Specialist**
City , State

- Offer superior service to potential and actual guests to the museum according to established procedures.
- Handle a large volume of in-person questions about The Tech Museum, exhibits, programs, films, special events as well as the downtown San Jose area.
- Be knowledgeable about The Tech Museum's mission, programs and exhibits and stay current with the functioning of the entire institution.
- Greet school groups by meeting teachers at buses outside the Group entrance, giving chaperone and student instructions to large groups Work collaboratively with other Guest Experiences staff, other museum staff and volunteers to provide an efficient and seamless experience for guests.

## Education and Training

California State Polytechnic University June 2016 Bachelor of Science : Aerospace Engineering GPA: GPA: 3.1 Dean's List - 2 quarters * Class Level: Junior Aerospace Engineering GPA: 3.1 Dean's List - 2 quarters * Class Level: Junior Aerospace Structural Mechanics I, Aerospace Feedback Control Systems, Fluid Dynamics, Gas Dynamics, Low-Speed Aerodynamics, Orbital Mechanics, Vector Dynamics, Thermodynamics.

Sophomore Aircraft Design, Experimental Aerodynamics, Experimental Aerothermodynamics, Aerodynamics and Flight Performance, Supersonic/Hypersonic Aerodynamics, Stability and Controls of Aerospace Vehicles, Guidance and Controls, Aerothermodynamics I, II, & III, Aerospace Structural Analysis I & II, Electric Circuit Theory, Electronics, Aerospace Engineering Analysis, Technical Writing for Engineers

Interests

American Institute of Aeronautics and Astronautics (AIAA) Fall 2013 - Present Active member at national and collegiate level Attend biweekly general meetings and attend field trips Society of Women Engineers (SWE) Fall 2014 - Present Active member at national level SAE International Fall 2014 - Present Active member at national and collegiate level

Languages

Conversational Spanish

Skills

C Programming, derivatives, edge, Electronics, special events, Team Leader, Lockheed Martin, materials, MATLAB, Microsoft Excel, Microsoft PowerPoint, Microsoft Word, San, simulation, Conversational Spanish, teaching, Technical Writing

Additional Information

- Involvement American Institute of Aeronautics and Astronautics (AIAA) Fall 2013 - Present Active member at national and collegiate level Attend biweekly general meetings and attend field trips Society of Women Engineers (SWE) Fall 2014 - Present Active member at national level SAE International Fall 2014 - Present Active member at national and collegiate level