

## ***Objective***

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Seeking a challenging position where I can gain and apply valuable aerospace engineering experience in a fast-paced, multicultural atmosphere of continuous learning and improvement to achieve corporate objectives.

## ***Skills***

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- Computational: Finite Element Analysis, Nastran, MATLAB, SolidWorks, TurboCAD Cura, Femap, CREO, Microsoft office, Google word processors, and Wordpress.
- Technical: Knowledge of Audio/Visual projection systems, network administration, PC hardware and software troubleshooting, and operating systems and software patching.
- Multicultural exposure: English (USA), Spanish (Mexico), German (Germany).

## ***Work Experience***

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### **Go Professional Cases – Product Design Engineer, P.M. Assistant (October/2018-June/2020)**

- Worked with Markforged 3D printers to create prototypes and finished products, using sandwich theory along with carbon, glass, and kevlar fibers to prevent for failures at critical points.
- Assisted in multiple designs, 30- 80 projects at a time, to create foam casing for drones and its components using CAD software such as Solidworks and TurboCAD.
- Worked directly with customers during the design process to keep communication about deadlines, changes to the design, pricing, objectives, and more.
- Helped with quality and control of all designs to approve them for production.

### **San Diego Zoo – Sales Associate (January/2012-December/2012)**

- Responsible for balance of the cash register, utilized accurate cash handling skills and helped children learn the process of climbing the rock wall in safely manner.
- Improved safety of the facilities to hit a record of 227 days without an accident by reading people's behavior and enforcing the regulations already made by the company.

### **Math and Natural Sciences Tutor- (January/2010-June/2011) Aguascalientes, Mexico.**

- Tutored and mentored in complex subjects such as Calculus and Physics for freshman students.
- Helped 15+ students to understand and apply concepts in calculus and statistics for final examinations. 100% of students passed the tests with satisfactory and excellent grades.

## ***Educational Background***

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### **Bachelor of Science in Aerospace Engineering**

Graduated: May 2018

*San Diego State University*

#### **SDSU Senior project . Stability and Control Lead**

- Determined the dynamic and static lateral and longitudinal stability of the aircraft (Close Air Support).
- Used MATLAB to find characteristic equations and eigenvalues for determination of modes.
- Performed the Life-cycle cost analysis of the aircraft incorporating development, test, and evaluation cost.
- Wrote five technical memos (preliminary weight estimate, landing gear, wing sizing, stabilizer sizing, wing and stabilizer layout).
- Sized control systems to perform all maneuvers, landing gear, and inboard profile.

#### **Finite Element Analysis (FEA) for Wing Structures Project**

- Used FEMAP software modeling and numeric solving Nastran to compare the modes and corresponding natural frequencies of two wing types in three different configurations.
- Used FEMAP software to simulate modes of a constrained and unconstrained wing, meshing different arrays of ribs inside of the wing.

#### **Structures Project (External and Internal Analysis of a Wing) . Analysis Lead**

- Derived of lift load distribution, transverse shear force, and bending moment equations. All with respect to spanwise location for an analysis at highest point of interest (wing root).
- Determined of maximum bending stress and normal stress (due to internal pressure) along the internal structure of the wing box (trapezoid), maximum shear flow and Von Mises criterion analysis with a safety factor of 80% for material failure.
- Performed wing stress analysis against a 4" crack perpendicular to principal stress direction.