**Bhavana Kishore Kumar**

Florida-DB | (386) 366-0240 | [bhavanakishorekumar@gmail.com](mailto:bhavanakishorekumar@gmail.com) | <www.linkedin.com/in/bhavanakishore>

**OBJECTIVE**

To pursue a career and carve out a niche for myself in the field of Aerospace.

**SKILLSET**

* Software Tools:         MATLAB, Femap, Ansys, Nastran and Patran, CATIA V5, Granta Edupack, CAD, Simulink
* Analytical Tools:       MS Office (Excel, PowerPoint)
* Others:                        Project Management, Problem Solving, Leadership, Communication
* Languages: English, Hindi, Kannada, Telugu

**EDUCATION**

Embry-Riddle Aeronautical University, Daytona Beach, FL                                                   **Aug 2021 - May 2023**

**Master of Science in Aerospace Engineering, GPA 3.9/4**

Area of concentration: **Structures and Materials**

**Coursework:** Fatigue and damage tolerance analysis, Structural Health Monitoring, Finite element analysis.

Member of Phi Beta Delta International Honor Society.

Dayananda Sagar College of engineering,Bangalore, India                                                           **Aug 2015 - Aug 2019** **Bachelor of Engineering in Aeronautical Engineering, GPA 4/4**

**ACADEMIC RESEARCH**

***Design and numerical analysis of a flow straightener. Jan 2019 – May 2019***

* Designed flow straightener of different designs using CATIA V5 to remove the swirls of air entering the turbine test rig. Performed numerical analysis using Ansys 15. The structural integrity of these were analyzed and compared.

***Structural analysis and material selection of a pressure vessel            Nov 2021 – Dec 2021***

* Modelled a basic pressure vessel for space application using NASTRAN and performed a static structural analysis by taking the reference numbers from literatures with a factor of safety of 4.
* Determined the material indices keeping possible load cases in mind and put forward the material that can be considered to produce the same using Granta Edupack.

***Structural health monitoring for an aircraft wing            Oct 2021 – Dec 2021***

* Proposed an SHM technique, FBG (Fiber-Bragg Grating) that could be incorporated in an aircraft wing to detect the delamination and other possible defects that can go unnoticed between the layers of composites.
* This technique proved to be cost-efficient and lightweight, thus, not adding additional weight to the aircraft structure.

***Stress analysis of a composite layup            Apr 2022 – May 2022***

* Set up a symmetric and unsymmetric composite using wet-layup process. Observed the curvature that was formed in unsymmetric laminate and theoretically analyzed it using the classical lamination theory with the help of MATLAB. Additionally, a tensile stress analysis was performed using MTS machine.

***Fatigue analysis of an Aircraft Hinge            Apr 2022 – May 2022***

* Static analysis for eight different load-cases was done using Femap for a given aircraft hinge model. This was further continued with fatigue analysis of the critical locations observed. Also, rain-flow analysis was carried out for an element in the critical location which aided in determining the fatigue life, optimum factor of safety that can be incorporated.

***Analysis of an Aircraft Engine Bearing Bracket         Sept 2022 – Oct 2022***

* Performed linear and non-linear analysis using SimScale, cloud computing software, of an Aircraft engine bearing brackets with separate vertical and horizontal load cases. This was done to three different designs proposed and the results were compared to determine the better design of the component.

**EXPERIENCE**

***Graduate Teaching Assistant at ERAU*                   *Aug 2021 – May 2023***

* Supervise students with performing the experiments at the Structures and Instrumentation lab at ERAU.
* Analyzing the data gathered helps students to get an insight of the experiments conducted.

**CERTIFICATIONS**

* Participated in the Boeing IIT National Aeromodelling competition held at IIT Madras during Shaastra 2018.
* Participated in The Aero Challenge in Mechnovate 2018 organized by American Society of Mechanical Engineers held at Vellore Institute of Technology.
* NPTEL online course certification in Aircraft Maintenance and Aircraft Performance.