Anubhav Vishwakarma

Mobile:(+91)8085166388
Email: anubhavvishwakarma029@gmail.com
LinkedIn: https://www.linkedin.com/in/anubhav029

EDUCATION

- **M. S. RAMAIAH INSTITUTE OF TECHNOLOGY (MSRIT)** BANGALORE, INDIA
  Bachelor of Engineering in Mechanical Engineering; GPA: 9.37/10 *Aug 2018 - Aug 2022*
  Coursework: Control Engineering, Numerical methods with Scilab, Mechanical Vibrations, Kinematics and Dynamics of Machines.

SKILLS

- **Tools:** ROS, Gazebo, MAVSDK, PX4, Linux, Docker, Git, Fusion 360, XFLR5, Ansys.
- **Programming Language:** Python, MATLAB, C++, C.
- **Technologies:** ModalAI -VOXL, Jetson Xavier-NX, Intel NUC, RealSense Tracking and Depth cameras.

EXPERIENCE

- **UAVIO Labs, Indian Institute of Science:** BANGALORE, INDIA
  UAV Systems Engineer *July 2022 – Present*
  - Deployed GPS-denied navigation for indoor warehouse navigation in different embedded system like ModalAI VOXL, Jetson Xavier and Intel NUC.
  - Used Graph based **SLAM** algorithm **RTABMAP** and **VOXBLOX** to generate the map and to perform localization.
  - Used **ROS** to take data from different pipelines such as tracking cam, TOF sensor, and single point lidar to do the autonomous flight.
  - Performed **HITL** (hardware in the loop) simulation of drone to test obstacle avoidance.

PROJECTS

- **Quatlas Aeromodelling (SAE international, aero design competition), MSRIT:** BANGALORE, INDIA
  Team Captain *Nov 2020 – April 2022*
  - Designed, fabricated and successfully flew bi-plane for SAE aero design, west 2022 competition held at Los Angeles. **[**Video]
  - Analyzed the design requirements from given rules by competition and performed the trade study to select a configuration for design which increased flight score by **55.8 percent**.
  - Reduced the wingspan by **56.25 percent,** helped increase in the flight score.
  - Used MATLAB to create a script to optimize design parameters, size the propeller, and analyze dynamic stability.
- **Design of UAM (Urban Air Mobility), MSRIT**: BANGALORE, INDIA
  Mini & Major Project (*Feb 2021 – Aug 2022)*
  - Performed the conceptual, preliminary, and detailed design of the wing, canard, fuselage, and distributed propulsion. [Image]
  - Performed the CFD and FEA analysis for assembly and individual parts using ANSYS Workbench.
  - Accomplished the optimization of airframe using MATLAB also used it for analysis of dynamic stability.

ACHIEVEMENTS

- Led the team for SAE Aero design west 2022 competition and came 1st in Asia, 2nd in design report and 9th overall out of 30 international teams. [Award]
- Got the best project award for the final year project named “Urban Air Mobility” out of 55 college student teams participated in PRDARSHANA-2022. [Certificate]
- Took the NPTEL course in ‘Aircraft design’ and was in top 2% out of 115 certified candidates and got the silver medal. [Certificate]