SHEETAL KUMAR

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SUMMARY

- Result-oriented individual, currently pursuing a Master's degree in Data Science at University of Houston.
- Currently seeking an internship opportunity in a high-quality engineering environment where my resourceful experience and academic skills will add value to the betterment of technology.
- Seven years of experience in System Engineering, Software Development, Verification and Validation of Safety Critical Flight Software with progressive experience in all phases of the Software Development Life Cycle.

EDUCATION

University of Houston, Houston, TX
Master of Science, Engineering Data Science Aug 2021 – (Expected) Dec 2022

Amity University, Noida, India
Master of Science, Avionics (Dual Degree) July 2009 - May 2014

Amity University, Noida, India
Bachelor of Science, Aerospace Engineering (Dual Degree) July 2009 - May 2014

TECHNICAL SKILLS

- **Programming:** Python, HTML, PHP, MySQL, C++
- **Software and Tools:** MATLAB/Simulink, IBM DOORS, SVN, VAPSXT, JIRA, MS Office, Arduino, Sketchup
- **Interests & Skills:** Machine Learning (experienced with: TensorFlow, Keras and Scikit-learn), Computer Vision, Robotics.

WORK EXPERIENCE

Collins Aerospace, Hyderabad, India - Platform System Engineer (Avionics) Sept 2020 – Jan 2021
- Epic Owner for OMS (Onboard Management System) and coordinated with the domain teams for software prototyping.
- Developed Test Procedures in accordance with FDOR (Flight Deck Operational Requirements).

Collins Aerospace, Cedar Rapids, USA - Platform System Engineer (Avionics) Sept 2019 – Aug 2020
- Worked on Viking Water Bomber Aircraft on System Design and Prototyping for Engine Indication System.
- Developed High Level System Requirements in DOORS.
- Performed System Testing for Viking Water Bomber Aircraft for Flight Display Software Application

Collins Aerospace, Cedar Rapids, USA - Software Verification Engineer (Avionics) Sept 2018- Aug 2019
- Performed Flight software certification related activities for the Flight Displays Systems Application for C-295 Aircraft.
- Performed MIL (Model-In-Loop), SIL (Software-In-Loop), Integration testing and SCA (Source Code Analysis).

Collins Aerospace, Hyderabad, India - Software Verification Engineer (Avionics) June 2015 - Aug 2018
- Worked on KC-390, C-295, AW609 Programs for Software Development (using MATLAB/Simulink), Verification and Validation of multi-functional display avionics software.
- Performed quality checks on verification tests for formal review processes in accordance with DO-178B Level A standards.
- Lead an eight-member team and drove the team to the expected goals every Sprint.

Voyage Aerospace Pvt. Ltd., New Delhi, India - CEO, Co-founder June 2014 – May 2015
- Worked on a wide range of unmanned systems ranging from ground rovers, quadcopters, fixed wing and rotorcraft UAV's.

PROJECTS

- **Facial Landmark Prediction of Masked Faces:** Used machine learning algorithms to predict the facial landmarks of a person wearing a mask. The predicted facial landmarks can be used to create a face-mesh allowing for an accurate facial reconstruction.
- **Aircraft Engine Health Prognostics by Sensor Fusion Feature Selection:** Used machine learning algorithms to predict an aircraft's engine RUL (Remaining Useful Life) by using sensor fusion feature selection approach.
- **The Opportunistic Network Environment Simulator (Collins Aerospace – Team Hackathon Competition):** Developed a Simulation Environment in Python capable of generating random movement of a wildlife herd with location tracking and subsequent determination of a data transmission pattern among various nodes and to ground station with graphics visualization.
- **Smart Control of Display Applications Prototype (Collins Aerospace - Innovation Day Challenge)** Developed a prototype to interact and control some crucial aspects of Flight Application Software through a handheld device, to reduce pilot workload.
- **Fractional Order Pitch Control System (Graduate Dissertation)** for Boeing 747 aircraft, using heuristic optimization methods.
- **Rocket design, launch and recovery with payload. (Under Graduate Major Project)** Developed a rocket with a payload as an autonomous rover, to be deployed from 1000ft and retrieved safely. On landing the rover would perform a ground task.
- **Autonomous Charging Pad** which serves as a wireless charging landing platform for drones.
- **Drilling Optimization (Ongoing Research):** Rate of Penetration Optimization for Oil and Natural Gas drilling operations.

AWARDS & ACHIEVEMENTS

- **Patent**, Systems and methods for reducing parallax in aircraft displays. US20190057486A1 2018