

Taashi Kapoor

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120 Andrew Pl, APT 401, West Lafayette, IN; (765)-772-6807

An Aerospace Engineer with application experience in the fields of Robotics, Artificial Intelligence, Computer Vision, Machine/Deep Learning, Control Systems, Systems Engineering and Design looking for full-time opportunities

EDUCATION

PURDUE UNIVERSITY, West Lafayette, IN

Master of Science in Aerospace Engineering

- Concentration in Autonomy and Control, Systems Engineering
- Thesis: AI-assisted perception of environment using drone swarms

August 2020 - Present
Cumulative GPA 3.75/4.0

Bachelor of Science in Aerospace Engineering

- Concentration in Propulsion, Dynamics and Control and Design
- Semester Honors & Dean's List (2017, 2019, 2020)

August 2016 – May 2020
Cumulative GPA 3.46/4.0

PROFESSIONAL EXPERIENCE

BLUEYONDER

Product Development Intern

- Prototyped an autonomous 3D mapping and warehouse inventory management UAV
- Developed computer-vision based GPS-free path planning and cycle counting software

May 2021 – August 2021

AUTONOMOUS & INTELLIGENT MULTI-AGENT SYSTEMS LAB

Research Assistant

- Devised a fully autonomous, multi-agent COVID-19 UV-C light sanitization UAV system
- Integrated Edge-AI with a companion computer to enhance object detection up to 7 times in full HD

August 2020 – Present

HYBRID SYSTEMS LABORATORY DRONE SWARM

Research Assistant

- Authored Python code for an autonomous drone swarm and demonstrated proof of concept using UWB
- Optimized Loco Positioning System placement and drone trajectories for better accuracy during maneuvers

May 2019 – December 2019

ROCKWELL COLLINS

Advanced Projects Intern

- Designed and manufactured an IP68 GPS Tracker to be implemented in highly sensitive areas using CATIA
- Developed the GUI for a Perimeter Secure Radar System to be applied in Military Zones through NetBeans

May 2017 – July 2017

ENGINEERING PROJECTS

INTRUSION DETECTION SOFTWARE (ECU) – ROLLS ROYCE

- Created classifiers for Deep Neural Networks (DNN) for supervised and unsupervised learning
- Optimized Intrusion Detection Software (IDS) to run on Embedded Systems (ES) within turbofan engines

January 2021 – Present

AI TRACKS AT SEA – NIWCP

- Authored software to automatically generate georeferenced tracks of maritime vessel traffic from a single electro-optical camera imaging the traffic from a moving platform

August 2020 – December 2020

AUTONOMOUS INDOOR PYLON RACING PLANE (SENIOR DESIGN)

- Constrained aerodynamics via XFLR5, devised propulsion system, aircraft structure, internal components
- Authored autopilot code to meet mission requirements through a motion capture system

January 2020 – May 2020

MASTEN AEROSPACE RFP

- Formulated thermal heating models to simulate heating on cislunar lander legs due to engine plume
- Conserved lander weight and established universal boundary conditions applicable to all future lunar landers

August 2019 – May 2020

SOFTWARE AND PROFESSIONAL LITERACY

- JAVA, ESRI, CATIA, MySQL, C/C++, Python, Linux, Matlab, Simulink, Visual Basic, HTML, CSS, ES, GitHub, Arduino, Raspberry Pi, Solidworks, CasADi, Gazebo, ANSYS suite, AutoCAD, XFLR5, QT, AI, OpenCV, PixHawk, ROS, SLAM, Object Detection, Obstacle Avoidance, 3D Mapping, LIDAR, DNN, IDS
- University of Pennsylvania robotics certificates in Estimation and Learning, Perception, Aerial Robotics, Mobility and Computational Motion Planning