# Taashi Kapoor

*An Aerospace Engineer with expertise in Machine Learning, Robotics, Artificial Intelligence, Control Systems, Systems Engineering and Design seeking challenging opportunities to apply skills in innovative projects*

## EDUCATION

**PURDUE UNIVERSITY,** West Lafayette, IN
**Master of Science in Aerospace Engineering**                   **August 2020 – May 2022**
- Concentration in Autonomy and Control, Systems Engineering       Cumulative GPA 3.75/4.0
- Thesis: An Intelligent UAV Platform for Multi-Agent Systems

**Bachelor of Science in Aerospace Engineering**                   **August 2016 – May 2020**
- Concentration in Propulsion, Dynamics and Control and Design       Cumulative GPA 3.46/4.0
- Semester Honors & Dean's List (2017, 2019, 2020)

## PROFESSIONAL EXPERIENCE

**BLUE YONDER**                                                   **June 2022 – Present**
Data Scientist II
- Engineered a physics-based Machine Learning solution that maps locations in the warehouse and predicts a split between the time taken to perform a task and time taken to travel during the task
- Pioneered and implemented a novel Machine Learning solution that optimizes warehouse tasks with a 72% improvement from current solutions and a $300,000/year cost savings per warehouse: ML Goal Time
- Spearheaded 4 patents devising innovative approaches to warehouse optimization while accounting for seasonal/holiday/product variations using unique ML models and deployment methodologies

**BLUE YONDER**                                                   **May 2021 – August 2021**
Product Development Intern
- Prototyped an autonomous 3D mapping and warehouse inventory management UAV
- Developed computer-vision based GPS-denied path planning and cycle counting software

**AUTONOMOUS & INTELLIGENT MULTI-AGENT SYSTEMS LAB**             **August 2020 – May 2022**
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

**ROCKWELL COLLINS**                                             **May 2017 – July 2017**
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

## ENGINEERING PROJECTS

**INTRUSION DETECTION SOFTWARE (ECU) – ROLLS ROYCE**             **August 2021 – May 2022**
- 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

**AI TRACKS AT SEA – NIWCP**                                     **August 2020 – December 2020**
- Authored software to automatically generate georeferenced tracks of maritime vessel traffic from a single electro-optical camera imaging the traffic from a moving platform

## SOFTWARE AND PROFESSIONAL LITERACY

- GCP, Azure, TensorFlow, Pytorch, Kubeflow, Apache Beam, Apache Spark, Docker, JIRA, BigQuery, Kubernetes, Postman, SQL, Databricks, Snowflake, Python, Linux, CUDA, Git, OpenCV, Matlab, Simulink, HTML, Arduino, Raspberry Pi, Gazebo, XFLR5, QT, PixHawk, ROS, ESRI, CAD, NetworkX
- University of Pennsylvania robotics certificates in Estimation and Learning, Perception, Aerial Robotics, Mobility and Computational Motion Planning
- Cornell University Machine Learning Certification