

# Taashi Kapoor

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1016 W Std Ave, #210, West Lafayette, IN

*An Aerospace Engineer with strong application, leadership and communication skills passionate about problem solving and teamwork looking for full time opportunities in the fields of design, manufacture and consulting.*

## EDUCATION

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**PURDUE UNIVERSITY**, West Lafayette, IN

Bachelor of Science in Aerospace Engineering (**3 Year STEM OPT**)

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

**Graduation: May 2020**

Cumulative GPA 3.46/4.0

## INTERNSHIP AND RESEARCH EXPERIENCE

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**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

**HYBRID SYSTEMS LABORATORY DRONE SWARM**

**May 2019 – December 2019**

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
- Simulated and improved autonomous drone control through Gazebo to reduce risk of real-life testing

## PROFESSIONAL EXPERIENCE

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**RESIDENT ASSISTANT**

**August 2018 – Present**

Purdue University Residences

- Fostered student success by facilitating social and academic growth of residents
- Strived for interpersonal excellence by building relationships and communities through floor events
- Trained meticulously to handle daily daunting situations and challenges to improve students' lives

## ENGINEERING PROJECTS

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**AUTONOMOUS INDOOR PYLON RACING PLANE (SENIOR DESIGN)**

**January 2020 – Present**

- Served as Team Lead to design, build and fly an autonomous indoor racing plane in a racecourse
- Constrained aerodynamics via XFLR5, devised propulsion system, aircraft structure, internal components and authored autopilot code to meet mission requirements through a motion capture system

**MASTEN AEROSPACE RFP**

**August 2019 – Present**

- 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

**ROCKET LAUNCH PROJECT**

**August 2019 – December 2019**

- Formulated trajectory prediction code and devised blueprints of a single stage rocket to reach 3000 feet
- Tested motor performance, aerodynamic characteristics, decent rate and ejection delay while continually enhancing performance of rocket

**AEROSPACE DESIGN RFP**

**August 2017 – January 2018**

- Served as Team Lead and engineered a reusable rocket system with midair recovery for a NASA RFP
- Designed and modeled rocket and aircraft capture system by applying MATLAB and CATIA
- Refined reusable model to provide a 357% cost savings over SpaceX's modern-day solutions

## SOFTWARE LITERACY

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- JAVA, ESRI, CATIA, MySQL, C/C++, Python, Unix/Linux, Matlab, Visual Basic, HTML, CSS, GitHub, Arduino, Raspberry Pi, Adobe Creative Suite, Solidworks, CasADi, Gazebo, ANSYS suite, AutoDesk, XFLR5, QT, Microsoft Office Suite,