

Prit Chovatiya

Phone: 765-775-8564

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Portfolio: <https://pritic.space/>

Education

University of Michigan, Ann Arbor

Master of Science in Aeronautical and Astronautical Engineering
Concentration in Controls & Systems Engineering (Airborne Systems)

Anticipated Graduation December 2020

GPA: 4.00

Coursework: Guidance, Navigation and Control | Systems Engineering | Flight Trajectory Optimization | Spacecraft Technology and Subsystem Design | Computer Vision | Multi-Disciplinary Design Optimization | Inference, Estimation and Learning | Space Policy and Management | Linear Systems Theory

Purdue University, West Lafayette

B.Sc. Aeronautical and Astronautical Engineering
Minor in Entrepreneurship and Product Lifecycle Management

Graduated May 2019

GPA: 3.73

Coursework: Flight Dynamics and Controls | Control System Analysis | Spacecraft Design | Dynamics and Vibrations | Aerodynamics | Fluid Mechanics | Structural Analysis Aeromechanics | Aerospace Design

Skills

Software

MATLAB/Simulink	Kalman Filter Development, Control Algorithms Implementation (Simulink), Numerical Optimization, STK Co-Simulation for Satellite Control, and Data Visualization	150-200 hours
STK - Satellite Trajectory Simulation Software	Satellite Trajectory Analysis and Constellation Architecture Modelling	30-40 hours
CAD Modelling: CATIA, Siemens NX, SolidWorks	Engineering Design Visualization, Sketching, Parametric Solid Modelling and FEA analysis	80-100 hours

Coding Languages

Primary: Python	Numerical Optimization, Computer Vision Algorithms Implementation, and Data Visualization	100-130 hours
Secondary: C++, C, Java, MySQL	Basic Algorithm and GUI Development, and Database Querying	50 hours

Manufacturing

CNC mill/lathe, 3D printers, laser cutters & power tools	Part Fabrication, Assembly, Fast Prototyping, and Tolerancing	100-120 hours
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Professional

Confident in public speaking, working in fast-paced environment (startups), multi-faceted roles, and team settings
Gallup Strengths Finder, Top 5 Strengths: Maximizer | Includer | Arranger | Positivity | Adaptability

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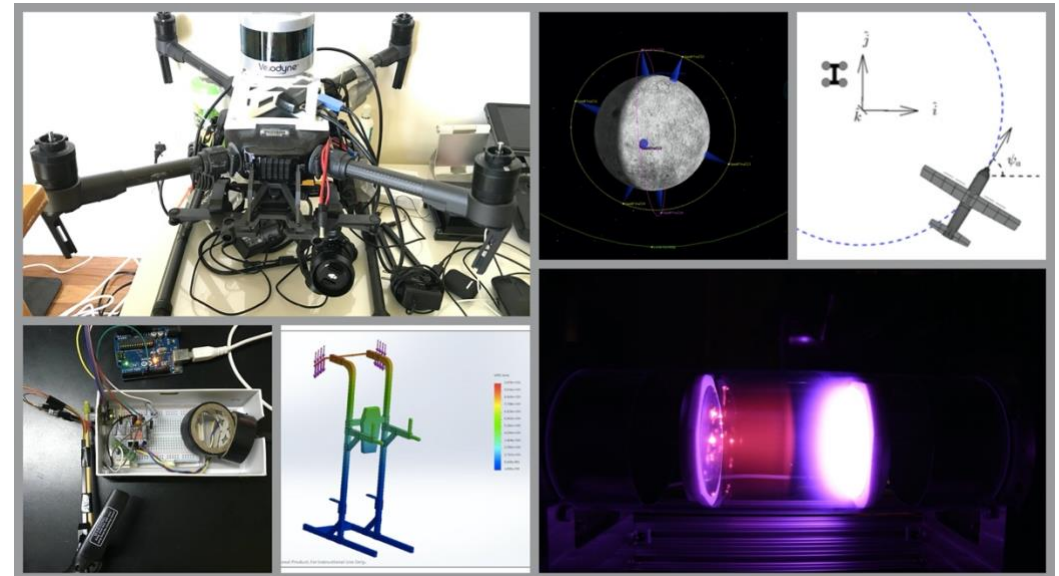
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Projects

UAV (DJI M210) Hardware and Software Integration + Testing	Individual Project	Ongoing
Algorithm Development for Drone Navigation and Control with Kalman Filtering	Individual Project	60 hours
First Iteration Full-Spacecraft Design & Systems Engineering	Individual Project	100 hours
Lunar Satellite Constellation Design & Systems Engineering	Team Project	16 weeks
Satellite Trajectory and Control Implementation in STK via MATLAB	Individual Project	5 weeks
CNN-Based Road Network Detection Algorithm Implementation	Team Project	30 hours
Bio-Inspired Breathing Mask Based on Camel Nasal Structure	Team Project	10 hours
Establishing Distributed Network System & Remote Control of UGV	Individual Project	25 hours
Design and Fabrication of Vacuum Chamber for Plasma Experiments	Individual Project	10 weeks
Specialized Terrestrial Rotorcraft Explorer Design for Mars	Team Project	16 weeks
Aircraft Assisted Rocket Stage Recovery Mission Design	Team Project	25 hours

Achievements

Dean's List and Semester Honors	2015-20
Purdue Engineering Student Council Industrial Scholarship Awardee	2018
Class of 1937 Scholarship Awardee for Leadership	2017
Summer Undergraduate Research Fellow	2016
All India 99 th Percentile Senior School Certificate Exam Awardee	2015



Work Experience

Organization	Role	Department/Lab	Responsibilities / Experience	Duration
University of Michigan	Research Assistant	Distributed Aerospace Systems and Control Laboratory	<ul style="list-style-type: none"> - Implementing computer vision algorithm for object detection on a DJI Matrice 210 series drone - Integrating software developer platform OSDK with onboard computers and advanced vision hardware like LIDAR - Assisting in developing computer-vision driven control algorithms for a UAV via ROS (Robotic Operating System) 	Current
University of Michigan	Systems Engineer	Distributed Universal Satellite Technology (DUST) Project	<ul style="list-style-type: none"> - Developed overall system architecture including mission and subsystem design, testing & validation roadmaps - Conducted stakeholder analysis and trade-studies for key design considerations for satellite constellation architecture using STK - Collaborated with NASA Jet Propulsion Laboratory on a bi-weekly basis to review progress and provide updates 	Fall 2019
Purdue University	Research Assistant	Flight Dynamics and Control Systems Laboratory	<ul style="list-style-type: none"> - Assisted with Simultaneous Localization and Mapping (SLAM) implementation on an autonomous UGV - Integrated data from LIDAR & Astra camera into ROS (Robotic Operating System) for algorithm development - Created a communications architecture for testing and implementation of UGV via remote control 	Fall 2018 - Spring 2019
Purdue University	Research Intern	Electric Propulsion Laboratory	<ul style="list-style-type: none"> - Designed and fabricated an electric breakdown vacuum chamber for testing spacecraft propulsion systems. - Presented a research talk, participated in weekly professional development meetings, and research seminars. - Part manufacturing experience with CNC mill, lathe, vertical/horizontal band saw and power tools for more than 120 hours. 	Summer 2017

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Previous Employment

Organization	Role	Department/Lab	Responsibilities / Experience	Duration
Aero360 – Commercial UAV Solutions	Summer Intern	Business Development	<ul style="list-style-type: none">- Researched drone fleet management & mission planning software in US & Indian markets for implementation- Competed in Airbus BizLab Startup Accelerator for implementation of drone fleet network across India- Prepared a strategic action plan for future business development along with a pitch deck presentation	Summer 2019
Purdue University Residences	Resident Assistant	Diversity and Inclusion Committee	<ul style="list-style-type: none">- Mentored and advised 56 undergraduate engineering students on personal, academic, and career concerns.- Created, organized, and facilitated floor events on social, cultural, and academic themes.- Liaised with floor residents and Purdue University Residences to advocate and uphold the university code of conduct.	Fall 2017 – Fall 2018
Purdue University	Lab Assistant	Information Technology (ITaP)	<ul style="list-style-type: none">- Held responsibilities such as customer service, computer, printer and other hardware troubleshooting, and software guidance.	Fall 2017 – Spring 2019
Purdue University	Student Associate	Dining & Catering	<ul style="list-style-type: none">- Held responsibilities such as customer service, maintaining stores and kitchen for 15 hours per week.	Fall 2015 – Spring 2016

Organization	Role	Department/Lab	Responsibilities / Experience	Duration
Aeronautical and Astronautical Engineering Student Advisory Council	Treasurer & Executive Board Member	Fundraising and Career Committee	<ul style="list-style-type: none"> - Administered and oversaw the Annual Aerospace Career Expo 2016 & 2017. - Maintained accurate financial records of council's funds of over \$14,000 and prepared an annual budget. - Initiated the Aeronautical and Astronautical (AAE) Treasurer's Panel for fundraising efforts for the AAE organizations. 	Fall 2017 – Fall 2018
Student Organization Grant Allocation Board	Executive Board Member	Grant Allocation Committee	<ul style="list-style-type: none"> - Allocated grants of over \$800,000 to 300+ clubs and organizations. - Attended information sessions and discussed budget allocation, review grant applications and voted on important funding decisions. 	Fall 2017 – Fall 2018
Student Success Programs, Boiler Gold Rush	Team Leader	Orientation and Transition Committee	<ul style="list-style-type: none"> - Mentored a group of 20 incoming freshmen for an easy transition to college. - Volunteered for campus tours, organizing activities and events as a part of the orientation program for a week. 	Summer 2016
Engineering Projects and Community Service – EPICS	Team Liaison AAEE - Mars Rover Team	Purdue Space Day: Activity Crew	<ul style="list-style-type: none"> - Designed an interface to tutor 90-100 children on controlling Mars Rovers (Arduino) with computer code. - Assembled an interactive prototype of a Mars Rover to present on the Purdue Space Day. 	Fall 2016
Introducing Diversity through Engagement and Service – IDEAS	Team Lead	Design Build Test Committee	<ul style="list-style-type: none"> - Orchestrated engineering projects for the Science Bound Program with 3 high schools in Indiana. - Collaborated with around 35 students on engineering projects for encouraging them to pursue engineering. 	Fall 2015
Purdue Billiards Club	Treasurer	Fundraising Committee	<ul style="list-style-type: none"> - Documented accurate financial records of club's funds over \$2000 and prepared an annual budget. - Organize travel funds, planned monthly events and conducted inter-collegiate billiards tournaments. 	Fall 2016 – Fall 2018