KUNAL NITIN PALASDEOKAR

(602) 517-9812 • kunal.palasdeokar@asu.edu • linkedin.com/in/kunalpalasdeokar

EDUCATION

Master of Science, Robotics & Autonomous Systems August 2023 - May 2025
Arizona State University, AZ **3.89/4**
Ira A. Fulton Schools of Engineering

Bachelor of Education, Mechanical Engineering August 2018 - August 2022
Savitribai Phule Pune University, Pune, MH , IN **9.08/10**
Sinhgad College of Engineering

SKILLS

Programming: FANUC TP, MATLAB, Python, C++
Network Protocol: TCP/IP, UDP, Ethernet
Robotics: ROS, Motion Planning, Computer Vision
Mechanical Design and Modeling Tools: MATLAB, Simulink, SOLIDWORKS, Autodesk Fusion 360
Tools and Technologies: Git, Linux Environment, Visual Studio Code
Behavioural: Communication Skills, Multi Tasking, Problem Solving, Time Management, Customer Service

ACADEMIC PROJECTS

Blimp Control Design August 2024 – Present

- Prototyped a control system for blimp stability, focusing on real-time response to environmental variables, utilizing MATLAB Simulink to model aerodynamic properties and control responses.
- Collaborated with cross-functional team, integrated sensors and actuators.

Autonomous Maze Navigation May 2024 – August 2024

- Developed a ***digital twin of a collaborative robot in Simulink and designed a maze-solving algorithm in MATLAB***, utilizing TCP for real-time communication and control between the software and the physical robot.
- Conducted motion planning and path optimization to navigate complex mazes, successfully testing in the digital twin environment before deploying and demonstrating on the actual robot.

Autonomous Drone Tracking and Landing January 2024 – May 2024

- Designed and implemented ***flight control for the Parrot Mambo drone using MATLAB and Simulink support packages***, enabling autonomous navigation and landing.
- Developed a vision-based tracking system utilizing the drone's camera to detect a color-marked line-following robot, allowing the drone to follow, descend, and land dynamically on the moving target.

EXPERIENCE

Graduate Service Assistant: Arizona State University August 2024 – Present

- Assisted in managing graduate-level robotics courses by setting up lab equipment, providing grading support, and teaching Simulink for digital twin and flight control design.
- Instructed students in FANUC robotics, focusing on both theory and hands-on teach pendant programming in practical labs, while troubleshooting devices to ensure operational efficiency and enhance learning through practical demonstrations and detailed concept explanations.

Technical Associate: Ciena September 2021 – April 2022 / March 2023 – July 2023

- Upgraded HTML user interfaces and managed GitLab pipelines for CI/CD, ensuring streamlined publication across 40 repositories.
- Led the migration of extensive documentation from Confluence to AsciiDoc and developed scripts for file format conversion, ensuring seamless content publication.

OTHER WORK EXPERIENCE

Student Success Advising Aide: Arizona State University (20 hours/week) October 2023 – August 2024

- Provided comprehensive assistance to students regarding courses, program requirements, enrollment procedures via email, phone, and in-person appointments, demonstrating strong communication and interpersonal skills.
- Assisted with administrative tasks, such as data collection, and automating filing, to support the efficient functioning of the office.