

# JAY MENON

Tempe, AZ | menonjay85@gmail.com | 602-471-3395 | <https://www.linkedin.com/in/jay-menon99/> | <https://github.com/menonjay85> |

## EDUCATION

### M.S. Robotics and Autonomous Systems

Arizona State University, Tempe, AZ

May 2025

CGPA: 4.00/4.00

Certifications: AZNext Robotics in Microelectronics Manufacturing & Cobot Technology

### B.Tech. Mechatronics Engineering, Minor in Robotics and Internet of Things

NMIMS University, Mumbai, India

September 2021

Certifications: Published Patent for Protective Helmet Design (India) - 375891-001 (Issued Feb 17, 2023)

## TECHNICAL SKILLS

**Programming Languages & Software Tools:** Python | C++ | C | MATLAB | ROS1 | ROS2 | SolidWorks | Nvidia Isaac | Linux | Ubuntu | Simulink | Docker | Git version control | Power BI | Fusion 360 | JMP |

**Technical Skills:** Generative AI | State-Estimation | Simultaneous Localization and Mapping | Rapid Prototyping | Data Analytics | OO Programming | Robot Kinematics and Dynamics | Circuit Designing

**Interpersonal Skills:** Leadership | Resourcefulness | Cross-functional | Collaboration | Highly Motivated

## PROFESSIONAL EXPERIENCE

### Data Analyst

Hindustan Unilever

November 2022 - July 2023

Mumbai, India

- Led a team of 3 in a project to design and implement Business Responsibility & Sustainability Report, improving data-driven decision-making processes, which contributed to a 12% improvement in the DJSI sustainability index.
- Developed and deployed automation algorithms within corporate sustainability initiatives, leading to a 15% reduction in manual processing time.

### Robotics Engineer

Mahindra & Mahindra

July 2021 - July 2022

Mumbai, India

- Implemented root cause analysis, machine diagnosis & predictive maintenance techniques to reduce production loss.
- Designed and implemented perception models and state estimation algorithms on Automated Guided Vehicles (AGVs) to optimize material handling processes within manufacturing settings.

### Robotics Intern

Automation & Control Systems

May 2019 - June 2019

Pune, India

- Engineered and programmed PLC and SCADA systems to automate and optimize complex industrial processes.

## PROJECTS

### LIOSAM (Lidar Inertial Odometry via Smoothing and Mapping)

Arizona State University

January 2024 – May 2024

Tempe, AZ

- Integrated Lidar and IMU data using factor graph optimization with C++ and ROS for open & closed-loop control to enhance real-time odometry, path planning, and sensor integration for autonomous navigation.
- Compared LIOSAM results to ORB-SLAM results with 3% improvement.

### Balance Bracelet

Arizona State University

January 2024 – May 2024

Tempe, AZ

- Developed a wrist-worn biofeedback device using low-power microcontrollers and PPG sensors to monitor HRV and RR for coherent breathing techniques in collaboration with the Barrow Neurological Institute team.
- Employed Fast Fourier Transforms for respiratory rate calculation and Convolutional Neural Networks (CNNs) achieving a training accuracy of 99.43% and a test accuracy of 99.42%.

### Tic Tac Toe with myCobot 280 M5

Arizona State University

August 2023 - December 2023

Tempe, AZ

- Programmed MyCobot280 M5 to play Tic-Tac-Toe by mimicking computer moves via pypyCobot library and Alpha-Beta Pruning algorithm.
- Integrated vision system for board recognition and move validation.

### Palletizing objects using UR5 (Universal Robots) robot arm

Arizona State University

August 2023 - December 2023

Tempe, AZ

- Using the UR5 robot arm to palletize and stack objects over one another with 99% placement accuracy.

## EXTRACURRICULAR EXPERIENCE

Arizona State University, Tempe, AZ, Graduate Writing Tutor

February 2024 - Present

- Provide comprehensive writing support for graduate students, covering research papers, theses & dissertations.