

# JEEVAN S DEVAGIRI

+1(906)-275-9823 · jdevagir@mtu.edu · LinkedIn · Twitter

## EDUCATION

- **Michigan Technological University** Houghton, MI  
*MS Mechatronics and Robotics Engineering ; GPA: 3.72*  
*Courses: Robotics Systems, Vision Systems, Advance PLC, Control System and Design, cybersecurity, Signal Processing*  
Aug 2021 - May 2023
- **PES University** Bangalore, India  
*B-Tech Mechanical Engineering ; GPA: 3.50*  
*Courses: Engineering Thermodynamics, Mechanics of Fluid, Computer Aided Design, Principles of Energy Conversation, GD&T,*  
Aug 2016 - May 2020

## SKILLS SUMMARY

- **Languages:** Python, C++/C#, RoS, HTML
- **Frameworks:** TensorFlow, Keras, Pandas
- **Tools:** MATLAB, Simulink, Solidworks, AutoCAD, Unity 3D, Ansys(fluent), Blender, Gazebo, Vuforia
- **Platforms:** Windows, Arduino, Raspberry, Microsoft Word, Drone Computing
- **Soft Skills:** Leadership, Event Management, Writing, Public Speaking, Time Management

## PROJECTS

- **Inverted Pendulum (MATLAB, Simulink, Cart, Beagle Bone):** (Completed) Designed a Simulink model for a Beagle Bone Blue to balance an inverted pendulum on a moving cart and achieved a 2-sec settling time on a 0.5m run. The cart position was commanded using an inertial sensor on the Beagle bone. Selected the desired closed-loop poles such that the maximum overshoot of the cart stays less than 2% for different PID gains. [Link to project](#)
- **Process Control Systems (PLC, PID, Control Systems):** PID controls are used to level the water in the tank by adjusting the parameters to regulate the level of liquid in the process tank. (I designed both open and closed loops.)
- **IoT Dustbin (Lo-Ra, Raspberry Pi, Sensors):** I worked on an IoT dustbin that collects different information about the user's trash as well as other primary data and delivers it all to the BBMP or Municipalities about the garbage that may be piled. Lo-Ra and Raspberry Pi were used, as well as weight sensors and ultrasonic sensors. Finalists of the TATA GRAND IoT Challenge 2018, which was organized by the TATA group.) [Link to project](#)
- **Designed an end effector for FANUC robot(FANUC, End effector, Robotics):** Designed a universal gripping vacuum end effector with a maximum grip force of 7kg payload for dish loading/unloading applications. By replacing manpower with a robot, an anticipated cost of operation was calculated, resulting in an annual cost savings of \$84,000. [Link to project](#)
- **Drone delivery System (Drone, Claws, Raspberry Pi):** Built a drone with available components for the chassis, an Arducopter for the control unit, various ESC, a 1300KV Brushless motor, and a gripper for the drone's delivery mechanism using a Raspberry Pi. We even created a packaging system to receive the supplied goods. [Link to project](#)

## EXPERIENCE

- **Michigan Technological University** Remote  
*Research Assistant (Part-time)* Aug 2021 - Present
  - **Robotics and Remote sensing Lab:** Building a self-balancing platform to land a moving drone.
  - **Frameworks Used:** RoS,Gazebo, MATLAB and Simulink is being used to develop the control system based self balancing platform for the autonomous landing drone
  - **Contribution:** Responsible for developing and designing the Simulink model for the simulation using RoS in Gazebo
- **Defence Internships** Remote  
*Intern (Part-time, Contractual)* Dec 2018 - May 2019
  - **Indian Navy:** At the Ship Building Center (SBC) in Vizag, I collaborated with Indian naval officers.
  - **Workings:** Submarine and ship operations, CAD modeling, and NDT testing
  - **DRDO:** Learned how to operate various mechanical instruments such as lathes and 3D printers.

## PUBLICATIONS

- **Patent: Modular Drone:** Patent granted by the IPO and published in late 2019. IN 201941047695 A [Link to project](#)
- **Paper: Designed a New PCHE (Printed Circuit Heat Exchanger):** Completed and published by Indian Society for Heat and Mass Transfer (ISHMT) in late 2019. [Link to project](#)

## HONORS AND AWARDS

- Runners up of Microsoft Innovation Lab - Dec, 2020
- State Finalists of KPMG Innovation and collaboration challenge 2019 - Jan, 2019
- National Finalists of the TATA Grand IoT Challenge - Oct, 2018

## VOLUNTEER EXPERIENCE

- **Badminton and Football** Bangalore, India  
*won DRDO tournament for Badminton; local championship for football.* Jan 2018 - Present
- **Model United Nations** Hyderabad, India  
*Nations—played the role of Human Rep from Syria* Jan 2018 - Present