

# Yashveer Jain

[yashveerjain.github.io](https://yashveerjain.github.io)

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## EDUCATION

<b>Masters of Engineering (Robotics)</b> University of Maryland College Park, USA	Expected - July 2024
<b>Bachelors of Engineering (Mechatronics) (GPA :9.44/10)</b> Manipal University Jaipur, Rajasthan, India	July 2016- July 2020

## WORK EXPERIENCE

<b>AIMonk Labs, Bengaluru</b> Machine learning Engineer	Aug 2020 - Aug 2022
<ul style="list-style-type: none"><li>Worked on a mathmojo project, where the task was to use OCR to detect the text and decode the math equation to latex symbols, where I created synthetic latex OCR data that increased the accuracy of the transformer OCR model to 60%.</li><li>Developed an AI solution for a client to detect the cars occupying the parking spots and improvised it by segmentation to detect whether the cars are covered by trees or not, and added additional features to enhance the detection matching, overall resulting in an increase in the accuracy by 20%, on hard positive cases.</li><li>To reduce the cost of operation, Auto scaling system was designed to spawn the servers as per need, which resulted in reduced cost significantly, and use servers only when needed automatically.</li><li>Headed the project for developing a testing environment for AI models, resulting in efficient testing and development of the AI project, by QA and dev team.</li></ul>	

## INTERNSHIP TRAINING

<b>Swaayatt Robotics, Bhopal</b>	Jan 2020 – May 2020
<ul style="list-style-type: none"><li>Implemented visual odometry using deep learning (like UnDeepVO) to handle depth estimation and rotation using a monocular camera.</li><li>Worked on the tracking algorithm like the Kalman filter, particle filter with the optical flow, to identify the sustainability of these algorithms on the ADAS system for tracking vehicles and pedestrian.</li></ul>	
<b>Omax Auto, Gurugram</b>	May 2019 – July 2019
<ul style="list-style-type: none"><li>Developed a program for automatic inspection of the part holes using Machine Vision algorithm, resulting in an increase in the company's production, for higher and faster quality inspection.</li></ul>	

## PROJECTS

<b>Home Automation:</b>	Jun 2021 - Aug 2021
<ul style="list-style-type: none"><li>Developed a private server as a center hub for all the devices across the house, using <i>FastApi</i>, <i>MQTT</i>, <i>Arduino</i>, <i>RaspberryPi</i>, <i>sqlite</i>.</li></ul>	
<b>Implementing GA and dynamic collision avoidance for autonomous ship</b>	Mar 2020 - Jul 2020
<ul style="list-style-type: none"><li>Implemented Genetic Algorithm on <i>cython</i> to generate a shortest path and added <i>pure pursuit</i> for smooth up the path and <i>dynamic collision avoidance algorithm</i>.</li></ul>	
<b>Third eye</b> - <a href="#">Github</a>	Oct 2019 - Dec 2019
<ul style="list-style-type: none"><li>A device created for blind people to navigate around the world, using computer vision, and Text2speech.</li></ul>	
<b>Search and Rescue Drone</b> – <a href="#">Github</a>	Jul 2019 - Oct 2019
<ul style="list-style-type: none"><li>Developed an AI Drone to detect human beings in the hazardous area and send their locations to the Rescue team.</li></ul>	
<b>Industrial Manipulator (2 axis cartesian manipulator)</b> – <a href="#">Github</a>	Jan 2019 - Apr 2019
<ul style="list-style-type: none"><li>Made a cartesian robot for detecting objects and grabbing them if an object is a metal, and placing it in a different bin.</li></ul>	

## EXTRACURRICULAR ACTIVITIES

Secured 1st Runner up in Infosys Competition Techazooka	Dec 2019
Best project award with cash prize of INR 15K in Manipal Navonmesh 2019	Nov 2019
Achieved runner-up position with INR 25K cash prize in Secure Vikram Award for best project innovation	Nov 2019
Won the silver medal in state level boxing championship	Mar 2012

## SKILLS AND LANGUAGES

**Production Skills:** Microsoft Office, Linux, Git, Docker, Microsoft10, AWS - Lambda, S3, SQS, EC2; Azure - devops, VM, google slides.  
**Machine Learning:** Computer Vision, Machine Learning, Deep Learning, NLP, machine learning algorithms (linear regression, SVM, logistic regression), Artificial intelligence Applications and Genetic Algorithms, Tensorflow, PyTorch.  
**Programming Languages:** Python, C, C++, Ladder programming, Embedded C, Matlab Simulink, Flutter & Dart  
**Others:** ROS(Robot Operating System), SLAM, Heuristic and Graph based search algorithms, FastApi, Mqtt, Path planning, OpenCV, LQR & LQG Control system..