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EDUCATION

Expected: May 2023 — **UNIVERSITY OF MARYLAND** — College Park, MD, USA
Master of Engineering in Robotics

May, 2020 — **PSG College of Technology** — Tamil Nadu, India
B.E in Robotics and Automation Engineering

EXPERIENCE

NEW YORK UNIVERSITY TANDON SCHOOL OF ENGINEERING: MECHATRONICS, CONTROL AND ROBOTICS LAB
FEB 2020 - MAY 2020

- DESIGNED AND FABRICATED A REHABILITATION DEVICE SPECIFICALLY TAILORED FOR STROKE PATIENTS WHO HAD PARTIAL LOSS OF MANEUVERABILITY OF THEIR ARMS.

L.G. BALAKRISHNAN & BROS LTD – AUTOMATION INTERN DEC 2017 - APR 2018

- DEVELOPED AND DEPLOYED A CUSTOM DATA LOGGING SYSTEM TO ACCURATELY TRACK AND ANALYZE PRODUCTION OUTPUT OF INDIVIDUAL MACHINES.
- LEVERAGED EXPERTISE IN CLOUD COMPUTING TO DESIGN AND IMPLEMENT A CLOUD-BASED DATABASE, STREAMLINING INVENTORY MANAGEMENT AND FACILITATING REAL-TIME PRODUCTION PLANNING

PROJECTS

Self-Driving Vehicle Traversing a Dynamic Environment (GitHub)

- Used Vision Transformer for generating a trajectory for a vehicle moving along a dynamic environment.
- Visualized by using Lyft's gym environment. Dataset used is Lyft's Level5 planning dataset

Depth-Estimation using a Monocular Camera

- Using a transformer-based architecture to divide the input RGB image into bins whose center value is adaptively estimated, and the depth image is obtained by a linear combination of the values

Challenge of Urban Search and Rescue (US&R) for Autonomous Robots (GitHub)

- Simulated a system wherein a pair of robots are used for the purpose of search and rescue in urban environments.
- The lead robot moves along the map to a list of positions at which an AR tag is used to signify the presence of a victim.
- The second robot receives the location of the victims and the order in which the rescue is to be carried out.

Trash Detection and Collection Robot in an unknown environment (GitHub)

- Designed and simulated a robot capable of traversing an unknown environment.
- The robot can detect any object using its cameras and deliver it to a pre-specified goal position

Maze solver using Depth First Search Algorithm (GitHub)

- A robot moves through a maze by making use of the Depth First Search Algorithm.
- The micro mouse simulator is used for generating a maze as well as for visualizing the robot in real time.

LEADERSHIP

TIDES Conference September 2016

- volunteered as an organizer for the TIDES Leadership Summit, conducted by the Confederation of Indian Industry.

ENEXT April 2016

- lead the team for the console at the E-NEXT Conference hosted by the Entrepreneurs Club of PSG College of Technology

KRIYA – Intercollege Technical Fest January 2019

- organized and managed a maze solver and memory-based path planner competition.

CERTIFICATION

- Google IT Support Specialist - Google, Offered through Coursera

COURSES(*-Ongoing)

- Control of Robot System, Introduction to Robot Modelling, Introduction to Robot Programming, Perception for Autonomous Robots, Planning for Autonomous Robots, Robot Learning, Software Development for Robotics, Fundamentals for Artificial Intelligence and Deep Learning Framework, Statistical Pattern Recognition, Advances in XR

SKILLS

- **Software/Programming Language**: Python, C, C++, C#, MATLAB, OpenCV, MySQL, Tkinter, Keras, PyTorch, TensorFlow, Git, ROS, ROS2, Unity, MATLAB, SolidWorks, Android Studio,
- Hardware: Arduino, Raspberry Pi, Siemens PLC, Quest 2, Android