SURIYA PRAKASH MURUGAN

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EDUCATION

- Masters in Robotics and Autonomous Systems (Artificial Intelligence) GPA: 3.4/4
  Arizona State University, Tempe, AZ *August 2022 –present*
  (Courses: Linear Algebra in Engineering, Modelling and Control of Robots, Planning and Methods AI, Robotics Systems II, Perception in Robotics, Autonomous Exploration Systems)

- Bachelor of Electronics and Instrumentation Engineering CGPA: 8.45/10
  Anna University, Chennai, India *August 2015 - March 2019*

TECHNICAL SKILLS

- **Programming Languages**: Python, Java, C, C++, R, Ladder logic, PDDL
- **Software Tools**: ROS, ROS2, TensorFlow 2.0, OpenCV, OpenGL, MATLAB, Gazebo, Agile methodology, JIRA, Pytorch
- **Concepts**: Robotics, AI planning, Machine learning, Deep Learning, Natural Language Processing, Reinforcement learning, SLAM, Embedded Systems, DBMS, GPU Programming.
- **Platforms**: Windows, Linux

WORK EXPERIENCE

- Senior Systems Engineer *October 2020 – July 2022*
  Infosys Limited, Mysore, India
  - Created an integration program for fetching and storing API data to the database using Python and MySQL for the construction of service monitoring dashboard for Business Intelligence.
  - Worked on an individual project developing an algorithm for predicting the response time based on the analysis of log data using machine learning. The program is constructed as an Autoregressive integrated moving average model (ARIMA) for time series forecasting the log data.
- Systems Engineer *May 2019 – October 2020*
  Infosys Limited, Mysore, India
  - Worked as an Automation Tester handling enterprise level web and mobile applications.
  - Developed scripts using java for automating web and mobile based application testing using tools like Selenium and Appium and reduced 80% of the manual work.

ACADEMIC PROJECTS

- **Autonomous Drone landing on moving object**
  - Simulated a drone landing program using ROS and Gazebo with ORB-SLAM implementation which autonomously lands the UAV on moving rover by tracking the April tag using Visual servoing technique.
- **Distance estimation using active Monocular camera**
  - Implementation of the paper 'TTCDist: Fast Distance Estimation from an Active Monocular Camera Using Time-to-Contact' and extended further by replacing the Luenberger observer with Kalman filter.
- **RoPAL – social assistive workspace robot**
  - Developed a workspace bot which tracks the emotional state of the user using deep learning-based emotion detection algorithm and provide aroma therapy which was implemented using Arduino Uno and esp-32 camera module.
- **Simulation for Forward and Inverse kinematics of Hexapod**
  - Representation of Hexapod kinematics that can be simulated based on the dynamic input from the user with an interactive webpage designed using JavaScript.
- **Object Classification using Convolutional Neural Networks**
  - Developed a classification model that identifies the diseased plants from the non-diseased which was constructed using Convolutional Neural Networks and Image Augmentation.
- **Development of Chatbot using Deep Learning and NLP**
  - A Chatbot trained using movies conversation data and built based on the Seq2seq architecture using Recurrent Neural Network with LSTM and Attention mechanism.