

Thulashitharan D

(+91) 9344803495 ◊ thulashitharan.d@gmail.com

Linkedin ◊ Github

Chennai, Tamil Nadu, India

EDUCATION

Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram

July 2021 - May 2025

BTech, Electronics and Communications Engineering.

CGPA: 8.56

Current Semester: 5th Semester

Minor: Artificial Intelligence and Machine Learning

CAREER OBJECTIVE

To work for an organization which provides me opportunity to work across diverse domains of Engineering, Science and Mathematics. I would like to contribute my cross domain knowledge for solving complex problems involving systems thinking and multidisciplinary approach. My broad knowledge in various areas has allowed me to gain skills in new areas of interest quickly and apply them to solve problems.

WORK EXPERIENCE

Embedded Software and Controls Intern at Veyyil Robotics *May 2023 - Oct 2023*

As a lead of a six-person team, I contributed to the development of a Sparring Bot designed to aid in the training of boxers. My primary responsibilities centered around the design of control systems and electronics and manage other team member's progress. This project presented unique challenges in terms of speed, precision and safety, which our team handled successfully. I used Arduino framework and Rust to develop the control system.

PROJECTS

Transfer Learning for open loop control of a soft robot

I used transfer learning for identifying positions of a joint from a camera feed. Then used deep learning for predicting the required motor position for the joint. My results were on par to other open loop control methods found in the literature.

libpam-pwdfilerefs

A PAM module for Linux which uses sha512 sum of passwords found in password files to authenticate users. Useful when a single user needed multiple passwords in different contexts.

Mesh Networking using ESP8266

Used software access point feature to allow arbitrary number of ESP8266 modules to communicate with each other. Used this to create a mesh network of ESP8266 modules.

auto-backlight

A rust program to change backlight brightness based on screen contents. Uses X11 to get screen contents and uses the average brightness of the screen to set backlight brightness. Useful for using laptop during the night.

Lox-Kmod

A linux kernel module to lox interpreter in kernel space. Used this to learn about linux kernel programming.

Kotag

A tag game which I made using godot. Supports multiple players using controllers and keyboard.

Gesture Controlled Robot

Gesture Controlled Robot using Arduino and mpu6050 accelerometer.

TECHNICAL STRENGTHS

Languages	Rust, C, C++, Python, Matlab
Technologies	Linux, Shell, SSH, Latex, Async Programming
Tools	PyTorch, Scikit-learn, NumPy, Pandas, Vim, ROS, Godot
Version Control	Git, GitHub

AREAS OF INTEREST

Machine Learning

Linux and Open Source software

Low level Programming Languages

Robotics

EXTRA-CIRRICULAR

Lead of Robotics Club IIITDM

Currently as a Lead I oversee all the club activities and provide direction to the club. As a club we have participated in various hackathons such as the Flipkart grid, competitions such as Robowars and funded projects from the industry.

Technical Vice Captain of Seshachalam House IIITDM

As a Technical Vice Captain I am responsible for organizing technical events for the house.

Research work

Currently engaged in a research project focused on Attention Layers. I am in the process of writing a review paper on this topic

LANGUAGES

English Professional working proficiency

Tamil Native proficiency