

Adityan Gopinathan Chembu

cgadityan@gmail.com (IN: +91 9488382348) **Embedded Software Engineer** | Pune, India

EDUCATION

**Indian Institute of Technology
Madras (IITM)**

B. Tech in **Electrical Engineering**
(Minor: **Computation**)

2019-2023, Chennai, India

LINKS



FAMILIAR FRAMEWORKS

PyTorch, TensorFlow, Pandas,
NumPy, ROS, Git, SVN

LANGUAGES

Python, C++, Embedded C, Perl,
C#

COURSES

Machine Learning, Natural
Language Processing,
Data Structures and Algorithm,
Calculus, Linear Algebra &
Probability Foundations,
Power Electronics, Computer
Organization, Digital Systems,
Secure Systems Engineering,

EXTRA CURRICULAR

- **Gold medal** in
Inter-Hostel **Hockey**
Tournament competing
amongst 8 teams (2023)
- 4th Place in Inter-Hostel
Weightlifting
Competition (2019)

PROFESSIONAL EXPERIENCE

Chetak Technology Ltd (EV Division of Bajaj Auto Ltd) | Embedded Software Engineer

Aug' 2023 - Present | Pune, India

- Implemented the concept of **Virtualization of ECU**, and emulation of Base Software module which is Propriety to BAL and accomplished it to run in real time, with multi-process interaction through shared memory and **Virtual CAN** Bus drivers.
- Built Python Automation tools for tedious **Software Release process** and emulation of End-Of-Line Software flashing tests for Motor Control Units.
- Implementation of **SPI driver** codes to calibrate position sensors in MCU
- Scripting and Auto Generation files for **Multi Channel CAN** configuration for Multi-slot charger project.
- Proposed a problem statement involving **Reinforcement Learning for adaptive MTPA control** and observed torque estimation **kalman filter**.

RBCDSAI (IITM) | Industrial Project (Prof. Nandan Sudarsanam)

Dec' 2022 - Feb' 2023 (3 months) | Chennai, India

- Built a model to Generate Augmented Synthetic Alert Generator using Probabilistic Auto Regressive NN(PARNN) within a specific timeline.
- Assisted in developing an interactive dashboard to display history of frequency of network requests in a server across systems and detecting anomalies using Isolation forest.

Center For Innovation (student-run org. in IITM) | **Electronics Module, Team Abhiyaan**

May 2020 - June 2022 (2 years) | Chennai, India

(part of the **Institute Autonomous Vehicle team**)

- Contributed to developing **PCB Schematics** for interfacing Electro-mechanic components in embedded circuits in the development of an Autonomous 4-wheeler. Worked with **DC-DC converters** and **inverters**.
- Assisted in writing embedded code on **Linux** environment in **Raspberry-Pi**(master) to interface with microcontrollers like ESP32 and Arduino with **ROS** topics commanding electro-mechanic components for autonomous vehicular functioning.

GAVS Technologies | Internship as ML Engineer

Oct' 2021 - Dec' 2021 (3 months) | Chennai, India

- Worked on ML models to determine LOS(Length of Stay) of In-patients, based on various parameters and predicting conversion rate of Out-patients to In-patients.
- Build a **Time-Series** forecasting model to perform inventory management to determine the scale of purchasing items efficiently.

PROJECTS

Analytics Club IITM | (Club in Center for Innovation, IITM)

Sep' 2021 - Dec' 2021 | Chennai, India

- Worked towards developing a trained model to participate in **Reinforcement Learning** challenges, focused on **MineRL** Basalt challenges and other simple Atari game agents, exposing to other OpenAI gym environments (Eg: Cartpole, Montezuma-Revenge etc.)

Product Design Club IITM | (Club in Center for Innovation, IITM)

Aug' 2020 - Dec' 2020 | Chennai, India

- Assisted in building a prototype for smart switching at homes, through android application and designing an economical switching mechanism using **Arduino/STM32** through bluetooth/WiFi connections.

VOLUNTEERING

Avanti, NGO (Oct 2019- June 2020): Mentored 50+ underprivileged students at Jawahar Navodaya, Pondicherry (12th grade) focussed on cracking Joint Entrance Examination and overall academic excellence

