



EDUCATION

Degree	Institute	Board / University	CGPA/Percentage	Year
B.Tech CSE	Vellore Institute of Technology, Chennai	VIT Chennai	8.97 (Till 5 th Sem)	2022-2026
Class 12	Velammal Vidyalaya, Mel Ayanambakkam	CBSE	95.2%	2022
Class 10	Velammal Vidyalaya, Mel Ayanambakkam	CBSE	91.6%	2020

TECHNICAL SKILLS

- **Languages / Technologies** : Python, C/C++, Java, R Studio, Matlab, LT Spice, SQL, Oracle SQL, MERN Stack (MongoDB, Express, React, Node.js), Arduino Programming, AWS Services, Reinforcement Learning Frameworks
- **Frontend Web Development** : HTML, CSS, Bootstrap, Tailwind, JavaScript, React Library
- **Backend Web Development** : NodeJS, ExpressJS, MongoDB Atlas, Oracle SQL, REST APIs
- **Tools**: Visual Studio Code, Jupyter Notebook, Git / GitHub, Arduino IDE, Postman
- **Operating Systems**: Windows, Linux, MacOS & Android

PROJECTS

- **Adaptive Traffic Signal Optimization Using Reinforcement Learning** Sep 2024 - Nov 2024
Artificial Intelligence (AI) and Reinforcement Learning [Report Link](#)
 - This project optimizes urban traffic signals using Reinforcement Learning (RL) to adapt to dynamic traffic flow. It combines a Random Forest Classifier for initial predictions with Q-learning for real-time signal adjustments. Simulated in Pygame, the system leverages real-time and historical data to minimize delays and improve traffic efficiency, demonstrating RL's potential for modern traffic management.
- **Campus Recruitment Management System Using Oracle SQL** Sep 2024 - Nov 2024
SQL, ORACLE Database and ORACLE SQL [Report Link](#)
 - A streamlined campus recruitment platform with dashboards for students and recruiters, job postings, applications, and interview scheduling. Developed through entity identification, ER modeling, schema normalization (1NF-3NF), and system implementation for an efficient user experience.
- **DevLab : Innovative Code Evaluation and Learning Experience** Aug 2024 - Nov 2024
Amazon Web Services (AWS) and Full-Stack Development [Report Link](#)
 - I co-developed DevLab, an Ed-Tech platform for interactive web development learning. I set up DynamoDB for scalable storage and used AWS Amplify for seamless hosting. The system features real-time coding challenges, personalized recommendations, and advanced analytics for an optimized learning experience.
- **Flappy Bird Game - Leaderboard Component Development** Jun 2024 - Jul 2024
Front-End Development, React.js and Tailwind CSS [Game Link](#)
 - Co-developed Flappy Bird, focusing on the leaderboard's front-end. Designed a dynamic scrolling scoreboard and a chart for top players, ensuring a responsive and engaging user experience.
- **News Aggregator Website with Dynamic Personalized Feeds Built Using MERN Stack** Jun 2024 - Jul 2024
MERN Stack Development [Webpage Link](#)
 - Developed a MERN-based News Aggregator with user authentication, personalized feeds, and real-time updates. Features include a responsive dashboard, dark mode, translation, and secure authentication for a seamless user experience.
- **Heart Rate Monitoring With Built-In GPS Module** Feb 2024 - Mar 2024
Wearable Computing and Internet of Things (IoT) [Poster Link](#)
 - Developed a smartwatch for continuous heart rate monitoring and emergency alerts via GSM. It detects abnormal fluctuations and sends real-time SMS notifications. The OLED screen displays pulse rate and XYZ coordinates, making it a compact and effective solution for health tracking and emergency response.
- **IoT-Driven Smart Irrigation with Moisture-Dependent Pump Control for Sustainable Agriculture** Aug 2023 - Nov 2023
Raspberry Pi, ESP32 Microcontrollers and Circuit Design [Report Link](#)
 - Developed an IoT-based smart irrigation system to combat water scarcity and unpredictable weather. It integrates soil moisture sensors, real-time rainfall forecasts, and threshold-based automation, with cloud-enabled manual and automated pump control for efficient water management.

EXPERIENCE

- **India Space Lab (ISL)**

Winter Internship

– Currently interning at India Space Lab, gaining hands-on experience in Advanced Drone Technology, CanSat and CubeSat satellite systems, Exoplanet Astronomy, and Space Entrepreneurship, building a strong foundation in innovative space technologies and business strategies.

[CERTIFICATE LINK](#)

Dec 2024 - Jan 2025

Remote
- **Rotaract Club of VIT (Chennai Campus)**

Green Rotaractor

– As a Green Rotaractor, I will contribute to community service projects, focusing on sustainability and social impact. I'll work with the team to organize initiatives that promote positive change while developing leadership and teamwork skills.

Sep 2024 - Present

On-site
- **CodeChef VIT-Chennai Chapter**

Full Stack Web Developer

– As Web Developers for CodeChef VIT-Chennai Chapter, we develop and maintain the club's website, ensuring a user-friendly experience. We create event-specific pages, support technical aspects of coding competitions and workshops, and collaborate on projects to enhance our online presence and community engagement.

June 2024 - Present

VIT-Chennai
- **InstiBuzz - All-in-one campus brand of IIT Madras**

Technical Team Member

– As a Technical Team Member at Instibuzz, the all-in-one campus brand of IIT Madras, I focus on maintaining and optimizing the website to ensure smooth functionality, an engaging user experience, and a strong digital presence for the brand.

Aug 2024 - Present

Hybrid
- **Ethnus Full-Stack Development (MERN STACK)**

Industrial Internship Trainee

– During my remote industrial internship, I built a MERN-based News Aggregator app with real-time updates, user authentication, and personalized feeds, enhancing my full-stack development skills and Agile teamwork experience.

[CERTIFICATE LINK](#)

June 2024 - July 2024

Remote
- **IEEE Computer Society VIT-Chennai**

Management Team Member

– As a Management Team Member of the IEEE Computer Society Club at VIT Chennai, I organize and manage events, workshops, and seminars to enhance technical skills. I facilitate communication and operations to ensure successful event execution and develop strategic plans to promote club activities and increase member engagement.

Oct 2023 - Jun 2024

VIT-Chennai

PUBLICATIONS

- **AI-Driven Predictive Maintenance and Anomaly Detection in Supply Chain Management**

Machine Learning Data Engineering & Processing

– This research explores the integration of AI and machine learning to enhance supply chain efficiency by predicting equipment failures and detecting anomalies in real time. By leveraging advanced techniques such as deep learning, time-series forecasting, and anomaly detection models, the study aims to minimize unplanned downtime, optimize maintenance schedules, and improve overall operational reliability in supply chain management.

Ongoing
- **LoRaWAN-based Glucose Level Monitoring for Enhancing Diabetes Management**

IoT, Data Processing & Cloud Computing

– This work develops a low-power, long-range glucose monitoring system using LoRaWAN and IoT sensors for real-time tracking. Integrating cloud computing, machine learning, and a secure web/mobile interface, it enables continuous monitoring, predictive analysis, and timely alerts to enhance diabetes management and reduce health risks.

Ongoing
- **AI-Powered On-Vehicle Sensor System for Real-Time Detection of Speed Bumps and Potholes**

IoT, Artificial Intelligence & Machine Learning

– This work presents an AI-powered on-vehicle sensor system that detects and classifies speed bumps and potholes in real time using ultrasonic, LiDAR, and camera-based sensors. Machine learning models analyze road irregularities, providing instant alerts to drivers. Additionally, a cloud-based mapping system enables crowdsourced road condition updates, enhancing navigation and road safety.

Ongoing

KEY COURSES TAKEN

- CSE & Mathematics:**Computer Programming: Python, Structured and Object-Oriented Programming : C/C++, Computer Programming: Java, Data Structures and Algorithms, Computer Architecture and Organization, Computer Networks, Web Programming, Design and Analysis of Algorithms, Operating Systems, Theory of Computation, Wearable Computing, Database Systems, Artificial Intelligence, Compiler Design, AWS Solutions Architect, Calculus, Differential Equations and Transforms, Complex Variables and Linear Algebra,Probability and Statistics, Discrete Mathematics and Graph Theory
- Electronics and Communication:**Basic Electrical and Electronics Engineering, Digital Systems Design, Microprocessors and Microcontrollers

CERTIFICATIONS

- **Advanced Drone Technology (Air Taxi) Workshop**

Completed the Advanced Drone Technology (Air Taxi) Workshop by India Space Lab, gaining insights into UAV design, programming, regulations, and the future of drones in AI.

[CERTIFICATE LINK](#)

- **Rev Up Arduino - Level 1**

Completed Level 1 of the 'Rev Up Arduino' program organized by the Robotics Club, VIT Chennai, acquiring foundational knowledge in Arduino programming, circuit design, and hardware interfacing through hands-on projects and practical applications.

[CERTIFICATE LINK](#)

- **C Programming Certification**

Successfully completed the C Programming Certification test organized at VIT University, Chennai Campus, with course material provided by the Spoken Tutorial Project, IIT Bombay. Achieved a score of 80.00% in the online exam conducted at VIT Chennai.

[CERTIFICATE LINK](#)

- **C++ Programming Certification**

Successfully completed the C++ Programming Certification test organized at VIT University, Chennai Campus, with course material provided by the Spoken Tutorial Project, IIT Bombay. Achieved a score of 80.00% in the online exam conducted at VIT Chennai.

[CERTIFICATE LINK](#)

- **Python Programming Certification**

Successfully completed the Python Programming Certification test organized at VIT University, Chennai Campus, with course material provided by the Spoken Tutorial Project, IIT Bombay. Achieved a score of 85.00% in the online exam conducted at VIT Chennai.

[CERTIFICATE LINK](#)

ACHIEVEMENTS

- Cleared the **INTER-SCHOOL LEVEL OF SPELL BEE INTERNATIONAL COMPETITION** and qualified for Regional/State level Competition for the academic year 2017-18.
- Secured a **Certificate of Perfect Score** for securing a centum in **Physics** during the final examination in Class 9.
- Secured **Certificate of Participation** for participating in the **FOREST TREK and MASS CLEANING CAMPAIGN** as a Scout, conducted in **Raj Bhavan, Chennai** in October 2018 on the occasion of the 150th birth anniversary celebration of Mahatma Gandhi.
- **RAJYA PURASKAR Awardee** as a scout in the Bharat Scouts and Guides for the year 2019.
- Secured **Certificate of Merit** for **Outstanding Academic Performance** and for being among the **Top 0.1 percent** of successful candidates in **Mathematics** in Class 10
- Secured **Centum in Computer Science (Python)** subject in Class 12 **CBSE Board Examination, 2022**
- Successfully completed the NPTEL Online Certification course on **Wildlife Ecology** with an Elite **Top 1 percent distinction**. Achieved a perfect score of **100 percent**, excelling in both online assignments (25/25) and the proctored exam (75/75).

COMMUNITY SERVICES

- Volunteered in The **Planet's Largest Coastal Cleanup at Marina Beach, Chennai** on September 21, 2024, collecting waste to protect marine life and promote sustainability with Rotaract Club of VIT, CommuniTree, and Rotaract District 3234.
- Participated in the **"One Walk, One Hope" breast cancer awareness walkathon** on October 27, 2024, at Island Ground, Chennai, organized by the District Rotaract Council to promote early detection, education, and community support.
- Participated in the **"Run for Quality" 5K run** organized by the **Bureau of Indian Standards (BIS), Chennai**, on November 10, 2024, to promote awareness of standards, consumer safety, and quality in daily life.
- Participated in **"Kadal Karai - Season 2, Episode 1" beach cleanup drive at Elliot's Beach** on January 12, 2025, organized by the Rotaract Club of VIT Chennai and supported by the Rotary Club of Chennai, contributing to environmental sustainability by removing litter and promoting community awareness.
- Participated in the 3rd Edition of the **K10K Cancer Awareness Run** on February 2, 2025, at Olcott Memorial School, Besant Nagar, Chennai, to promote **Cancer Awareness and support fundraising** for underprivileged patients, organized by Kauvery Cancer Institute and Kauvery Hospital.