Awin Pavan

B.tech - Automation and Robotic Engineering
Amrita Vishwa Vidyapeetham, Coimbatore

 +971528854742
 awinpavan2002@gmail.com

Aspiring Data Scientist and AI Engineer with a strong foundation in **Python, machine learning, and software development**. Experienced and proficient in data preprocessing, development, and API deployment using tools like **Pandas, scikit-learn, spaCy, and FastAPI.** Experienced in working with **transformer model and NLP pipelines**, and passionate about leveraging data-driven approaches to solve complex business and technical challenges.

Education

- **Bachelors Degree (B.Tech / Automation and Robotic)** — *2021 - 2025*
  Amrita Vishwa Vidyapeetham, Coimbatore, Tamil Nadu, India

- **High School (CBSE)** — *2016 - 2020*
  Palghat Lions School, Palakkad, Kerala, India

- **Early schooling (CBSE)** — *2005 - 2016*
  Private International English School, Abu-Dhabi , UAE

Projects

- **Q-Learning Based Mobile Robot Navigation** — *January 2025 - April 2025*

  - Developed an indoor mobile robot navigation system using a Q-learning algorithm for shortest path planning.
  - Integrated sensors such as a lidar and encoders with a Raspberry Pi and Arduino, interfaced via the Motor Driver Shield for obstacle detection and robot localization.
  - Implemented a PID controller to ensure smooth and stable motor control based on encoder feedback.
  - Conducted simulation and real-world testing to evaluate performance in a static environment.
  - Language Used: Python
  - Technology Used: Arduino, RPLiDAR A1M8 (Lidar), LM393 (Encoder), L293D (Motor Driver), ROS Jazzy, Raspberry PI-5

- **Automated Turret** — *April 2024 - July 2024*

  - Developed a prototype of an automated turret defense system.
  - Designed DH parameters and performed torque calculations on the turret system.
  - Implemented K-Means ML algorithm to distinguish targets and used HOG Transform for feature extraction via Pi-Cam.
  - Technology Used: Raspberry PI-4, PI-Cam
  - Language Used: Python

- **Dynamic analysis of Spot Mini Robot** — *April 2023 - July 2023*

  - Simulated robot dynamics like jumping, walking, and flipping using MSC Adams software.
  - Software Used: MSC Adams

- **Obstacle avoidance robot** — *April 2022 - July 2022*

  - Developed a two-wheeled robot with obstacle avoidance using ultrasonic sensors and Arduino.
  - Technology Used: Arduino, L293D (Motor Driver), HC-SR04 (Ultrasonic Sensors)
  - Language Used: C++

Professional Experience

· **HERO Apps, Software Development (Dubai, UAE)** *June 2024 - July 2024*
Internship *Online*
  – Participated in GRMS system client feedback sessions at JW Marriott Marina.
  – Designed and deployed a FastAPI-based web application with a SQLite backend; built a prototype To-Do list app.

· **Cartel IT Solutions, Software Development (Dubai, UAE)** *June 2023 - July 2023*
Internship *Offline*
  – Worked with NLP tools including the spaCy library and spaCy-transformers for text processing tasks.
  – Gained hands-on experience with LLM models via the Groq API for advanced language tasks.

· **Pawzz, Animal Welfare fund Raiser** *June 2022 - July 202*
Internship Online
  – Conducted door-to-door fundraising campaigns and actively participated in team-led public initiatives to raise funds.

Skill Sets

Languages: Python, C++, SQL, HTML
Framework: ROS 2
Libraries : Pandas, Scikit-Learn, Matplotlib, NumPy, spaCy
Soft Skills: Self-learning, Presentation, Adaptability, Team Player

Position of responsibility

· **Hosting of Natural Energy Conservation Day Event** Amrita Vishwa Vidyapeetham *November 2023*

  – Anchored event with 150–200 attendees; coordinated 20–30 volunteers.
  – Managed event flow and received commendations for professionalism and engagement.

· **Treasurer of Natyasudha Club** Amrita Vishwa Vidyapeetham *2023 - 2024*

  – Managed budgets for ~7 teams consisting of around 150–200 members in total.
  – Increased savings by 70%

· **Secretary of Natyasudha Club** Amrita Vishwa Vidyapeetham *2024 -2025*

  – Coordinated club participation in major college and inter college competition events like Anokha, Amrita MUN, Thandav, IIM Unmaad dance fest, NIT Ragam dance fest, etc.

Extracellular Activities

  – Active performer at college dance events: Anokha, Thandav, Amrita MUN, Anti-Ragging Day, etc.
  – Represented college at national-level dance fests: NIT Ragam '22, '25, IIM Unmaad '22, '24
  – Won 1st place at College Dance Championship' 25.
  – Passionate runner; secured 3rd place in the 5K at the 2022 inter-house competition, 1st place in the 10K at the 2025 inter-college competition, and 1st place in both the 5K and 1.5K at the 2025 inter-house competitions.
  – Hobbyist pencil sketch artist, specializing in facial portraits

Other Information

  – Nationality   : Indian
  – Date Of Birth   : 22nd August 2002
  – Passport No.   : U8037725
  – Passport Validity : 8th February, 2033
  – Driving License : Indian