Aditya Jain

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Education

VELLORE INSTITUTE OF TECHNOLOGY
Int. M-tech in CSE with Data Science
📅 2020-2025   📍 Vellore, Tamil Nadu
- Currently in my 4th year
- Cgpa 9.09

DELHI PUBLIC SCHOOL
10+2
📅 Sep 2020   📍 Meerut, UP
Graduated with 93.4

Links
- GitHub **Aditya09**
- Linkedin **AdityaJain**

Skills

TECHNICAL
Python • ROS2 • MQTT • WebSocket • SAM2 • JavaScript(basics)• RTSP/RTMP • OpenCV • Numpy • PowerBI • FastAPI • mySQL

MISCELLANEOUS
Figma • Docker • Microsoft Office • Git • VS code

MANAGEMENT
Digital Marketing • Operations Management • Product Analysis • Growth Strategy • Event Management • Public Speaking

Extra Curriculars

OPERATIONS MANAGER
E-Summit 2022
Was part of the operations team for one of the biggest Business Fest of the college under Entrepreneurship Cell.

VOLUNTEER
TEDxVITChennai
I was as one of the students for this ted talk, where 10 students were chosen out of 200.

CAMPUS AMBASSADOR
E-Cell IIT Guwahati
Was part of this 3 months online program and was the representative for IIT-G in my college.

CORE COMMITTEE MEMBER
-> IET VIT -> IEEE-SSIT -> F.E.P.S.I NGO -> DREAM MERCHANTS -> VIT SPARTANS

Experience

AI/ML ENGINEER & FORMER INTERN
KSMS TECHNOLOGIES SOLUTIONS Pvt. Ltd.
📅 June 2024 – Present   📍 Pune, India
- Developed LiDAR-camera fusion with ROS2 for real-time object detection, segmentation, angle and distance estimation.
- Designed a Neo4j graph database for efficient object mapping and spatial queries.
- Implemented MQTT and WebSocket protocols for robot-to-central system communication.
- Enabled wireless drone video streaming using DJI SDK for PC-side AI inference.
- Built end-to-end custom object dataset management and training pipeline.

DIRECTOR OF FINANCE
VIT Trekking Club
📅 Feb 2023 – Feb 2024   📍 Vellore, India
- Successfully developed and executed annual budgets, optimizing resources to surpass club goals.
- Secured sponsorships and orchestrated fundraising events for sustained finances.
- Implemented robust financial policies, conducted audits, ensuring regulatory compliance and safeguarding club assets.

JUNIOR DATA ANALYST
Zyvka Global Services
📅 May 2023 – July 2023   📍 Noida, India
- Conducted exhaustive market research, pinpointing growth opportunities crucial for strategic decision-making.
- Monitored KPI's, performed financial analysis, offering actionable insights to optimize business performance.
- Led cross-functional projects, ensuring timely delivery of results, driving significant business growth.

BUSINESS DEVELOPMENT AND GROWTH STRATEGIST
onTribe
📅 Feb 2021 – Sep 2021   📍 Delhi, India
- Formulated a comprehensive business sales and marketing strategy, driving remarkable growth.
- Identified new business opportunities, markets, trends, fostering partnerships
- Conducted training programs, empowering the team in operational functionalities and lead generation.

OPERATIONS MANAGER
Entrepreneurship Cell
📅 Dec 2020 – Jun 2022   📍 VIT, Vellore
- Strategically planned, directed work, and managed diverse events, ensuring seamless operations.
- Spearheaded process improvements, guaranteeing on-schedule completion of tasks.
- Established training standards, designed engaging intra-core activities, and managed the hiring process.

Competitions

INTER IIT TECH FEST
WE developed a ROS2-based centralized OS for swarm navigation, enabling real-time communication and coordination among multiple autonomous agents. The system utilized MQTT/WebSockets for inter-robot communication, graph-based path planning for optimal navigation, and multi-agent SLAM for collaborative mapping. Additionally, it integrated LiDAR and vision-based perception to enhance obstacle avoidance and environment understanding

📅 December-2024   📍 IIT Mumbai

SOCIOTHON 2.0
We designed the interface of an app (AURA) that demonstrated to be the one stop solution for the problem of disposal of personal protective equipment (PPE) in the ongoing novel coronavirus disease (COVID-19) pandemic

📅 May-2021   📍 Rotaract Club, VIT

Certifications

ROS2 for Beginners(ROS Foxy + Humble)

Hands-On AI: Build Your Own GPTs

Agentic AI: A Framework for Planning and Execution

Microsoft : Security, Compliance, and Identity Fundamentals

Digital Marketing Foundations

Product Management: Building a Product Roadmap

Getting Started with Enterprise Data Science

Journey to Cloud: Envisioning Your Solution

Projects

ROS2 OBJECT-CENTRIC PLANNER AND ANNOTATION SYSTEM FOR QUADRUPED ROBOT
Tools used: ROS2, YOLOv8, RealSense, TF2, PCL, OpenAI Vision, Neo4j, RViz2, Python, C++
- Designing a ROS2-based local planner that navigates to object-relative free space using TF, costmap, and odometry data.
- Implementing goal selection logic based on YOLO-detected objects and stored map-frame coordinates from prior annotations.
- Enabling voice-interactive task flow: annotate surroundings, revisit scenes, align to object pose, and trigger actions.
- Earlier: Built full object detection and logging pipeline using YOLOv8, RealSense, OpenAI Vision, TF2, and Neo4j.

AUTONOMOUS OBJECT SEGMENTATION MODEL
Tools used: Python, PyTorch, YOLO (Ultralytics), SAM2, OpenCV, Voila, Jupyter Notebook, Streamlit, MongoDB
- Developed an end-to-end autonomous object annotation system using SAM2 to segment objects in video inputs, enabling efficient dataset creation for object detection training.
- Built a web-based application with a Voila frontend and Jupyter Notebook backend, integrating dataset management (annotation, splitting) and YOLO training automation to generate a best.pt model.
- Implemented user authentication with MongoDB and designed a local server-based file storage system, ensuring seamless dataset processing and model deployment.

HR DASHBOARD
Tools used: Power BI, mySQL
- Conducted data cleaning in MySQL, addressing issues like negative ages.
- Developed a visually compelling HR Dashboard in PowerBI for effective data presentation.
- Provided insights on gender, race, age distribution, turnover rates, and tenure.
- Identified trends, such as a higher representation of males and white ethnicity.
- Recognized Marketing department with the highest turnover rate.

FARMI - YOUR FARMING CONSULTANT
Tools used: Python, Flask, Figma, Heroku
- A predictive web tool for crop selection based on soil analysis and rainfall, utilizing Scikit-Learn Linear Regression in Python.
- Designed an intuitive UI/UX with Figma, while implementing Flask for seamless backend processes.
- Future plans include adding a contact feature for farmer-organization collaboration and introducing person-to-person video guidance for expert consultations.