Muhmmad Abrar R
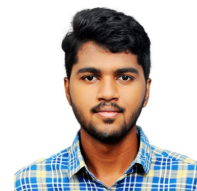
✉ muhmmadabrar159@gmail.com in LinkedIn ⬡ Github 🌐 Personal Portfolio

Date of Birth: 15 Sep 2003
Phone: +91 73053 66617

Career Objective

Aspiring **Software Development Engineer** with a strong foundation in **Artificial Intelligence and Robotics**. I seek to leverage my expertise in **software development** to build innovative and scalable solutions. With hands-on experience in **AI-driven projects and internships**, I am passionate about utilizing cutting-edge technologies to solve **real-world problems and drive efficiency**. Eager to contribute to a dynamic team where I can further refine my technical skills and deliver impactful results.

Education

Vellore Institute of Technlogy, Chennai, India. July 2021 – Current
BTech Computer Science and Engineering with specialization in AI and Robotics *CGPA: 9.10*

Maharishi Vidya Mandir Sr. Sec. School, Chennai, India. July 2007 - May 2021
  Percentage: 96

Work Experience

Viseka Global May 2024 – July 2024
Product Development Summer Intern *Chennai, India*
- Developed a **WhatsApp chatbot** that boosted **B2B customer engagement** by 25%
- Integrated **Flask, Twilio, and WooCommerce APIs** to streamline **order processing**, reducing **response time**
- Enhanced chatbot capabilities using **LLama3 8B**, enabling contextual **function execution**

Niyata Infotech October 2023 – January 2024
AI Intern *Chennai, India*
- Worked on **Tiny Machine Learning**, implementing a **Deep Learning** on **microcontrollers** and resource-constrained devices
- Conceptualized and implemented **Anomaly Detection** and **Real-Time Machine State Detection**, achieving **30%** faster response times on **ESP32** and **STM32 Microcontrollers**

Projects

Routecraft - Garbage Truck Route Optimization View Github
- Optimized garbage truck routes using the **A* algorithm** and geospatial data, cutting operational costs by 20%
- Implemented real-time route adjustments based on **dustbin fill status** and distance, boosting efficiency by 30%

DroneGuard - A Geospatial Flood Surveillance System View Github
- Developed a **an application** for **drone image stitching and segmentation**, increasing flood surveillance efficiency.
- Implemented **UNET**, achieving 92% accurate segmentation of water-affected areas for precise flood mapping
- Planned future integration with **autonomous drone systems**, projected to enhance disaster response.

Website for Social Entrepreneurship Club View Website
- Developed a fully functional **front-end website** for **Centre for Social Entrepreneurship and Development (CSED) VITC** using **ReactJS** and **VITE** for component integration

Animal Intrusion Detection System View Github
- Developed a real-time animal monitoring system using **YOLOv8** and **Twilio API**, achieving 90% detection accuracy and 100% real-time alerts
- Completed as part of the project requirement for the course **IoT Domain Analyst**

Honours and Awards

Best Research Paper Award April 2024
NMIC 2024 *Indian Society for VLSI Education (ISVE)*
- Presented my work on **Conditional Monitoring of Ship Engines using TinyML** at the **4th International Conference on Nanoelectronics, Machine Learning, Internet of Things, and Computing Systems (NMIC-2024)**.

Haxios Competition Winners March 2023
IEEE Student Branch, VITC *Vellore Institute of Technology, Chennai*
- Developed a **Real Time Alzheimer Predictor using Deep Learning** that detects the presence of Alzheimer disease in a MRI scan.
- Secured the 3rd Position in **HAXIOS** a flagship 24 hr hackathon conducted by the **IEEE** Student Branch, VIT Chennai

Technical Skills

Languages: Python, Java, C, C++
Web Development: Node.js, Express.js, Flask, React, TailwindCSS, HTML, CSS, Bootstrap
Databases: MySQL, PostgreSQL, MongoDB, SQLAlchemy
Web Technologies: Streamlit, Firebase
Android Development: Kotlin, Dart, Flutter
Tools: VS Code, GitHub, MATLAB, Keil, STM32CubeIDE, Arduino, MS Office
Python Frameworks: Numpy, Pandas, Matplotlib, TensorFlow, Keras, Scikit-Learn, OpenCV, NLTK
Courses: Google Data Analytics, Data Analysis with R (Google, Coursera), TinyML (Harvard, EDX), Linux for Beginners

Extra Curriculars and Achievements

Founding Core Member and the Head of Content Writing Department   **Feb 2024**
Club for Social Entrepreneurship and Development   *Vellore Institute of Technology, Chennai*

Programme Migration   **May 2022**
Batch of 2021   *Vellore Institute of Technology, Chennai*

Secured a spot among the **top 2%** of my department eligible for a **department change**, successfully migrating from **Electronics and Communication Engineering** to **Computer Science Engineering**.