Badha Rathna Sabhapathy
rathna.sabhapathy2020@vitstudent.ac.in

Education

Integrated Master of Technology, Software Engineering September 2020 – June 2025
Vellore Institute of Technology, Vellore, Tamil Nadu GPA – 8.83/10

Central Board of Secondary Education, Class 12 July 2020
Indus Universal School, Hyderabad, Telangana 80.4/100

Experience

Students for the Exploration and Development of Space V.I.T Chapter
September 2020 – Present

- Built and developed an algorithm to get location of an object in images obtained from a drone, while considering the current dynamics of the camera.
- Engineered an algorithm to identify specific characters / shapes, from an image obtained by a drone at high altitude.
- Built and implemented and bug tested an automated path planning, object detection and obstacle avoidance algorithm for Drones to participate in the AUVSI SUAS competition.

Research and Development Intern
Vifr Laboratories - V.I.T Incubated Startup
October 2022 – December 2022

- Implemented and Bug tested pre-existing Framework for Networking in UNITY
- Tested VR modules to fix Logical edge cases with the playable games.
- Implemented and tested multiple real time, high bandwidth, data communication protocols to transfer video stream over LAN.
- Implemented and tested eye tracking in VR headset to track the users' points of focus.

Projects

- Developed a Driving quality system, complete with ESP32 and a android app which landed us on a second place for a Hack-A-Thon organized by a chapter in VIT (ACM VIT)
- Developed a stock tracking app with android studio using web scraping and various API's to get real time data.
- Implemented Asteroid Detection system using YOLO.
- Created a DL model to predict diseases of various crops using GoogLeNet and ReLu.
- Created a model for finger vein biometric identification with a CNN core.
- Made a custom Meta classifier which made you of various other machine learning models for predicting Heart Diseases.
- Created a transformer-architecture based Chabot(python).
- Created a producer-to-consumer supply chain tracking system on MATIC.
- Working on creating a platform agnostic Layer-0 Blockchain, for industries to implement a robust proof of claim system.
- Analyzed crop yield in various countries, using python scripts in Hadoop environment.
- Implemented a hybrid T-DES, an existing Encryption standard with other encryption standards to make it more suitable for real time applications.
- Automated household devices using Aurdino and ESP32 with BLYNK.
- Created a web deal scraper with Core Java (Netbeans).

Languages

Core Java, Python, Solidity, Rust, GO, JS

Skills

- Essential core concepts in all of the languages mentioned above.
- Android Studio with Firebase for creating applications for android.
- Python Tensorflow, PyTorch, along with all their supporting packages, and most importantly Models familiarity (keras – tensorflow and torch.nn – Pytorch)
- Transformers (python), for next gen AI models.
- Text to Image generation.
- Computer vision with experience in deep learning frameworks, object detection, image segmentation, and classification, and familiar with YOLO and Faster R-CNN.
- UNITY for Game Logic and Level creation.
- WebRTC, FMETP Stream for video streaming in UNITY
- SOLIDITY programming for smart contracts.
- ESP32 and Arduino to implement IOT based home automation.