Shyam Santhosh

8148785289 | www.linkedin.com/in/shyamsanthosh/ | https://github.com/ShyamSanthosh04
shyamsanthosh1967@gmail.com

EDUCATION

Vellore Institute of Technology   Chennai, Tamil Nadu
Bachelor of Technology in Electronics and Computer Engineering   *Sep. 2022 – Jul 2026*
- Courses: Data Structures and Algorithms, Database Management Systems (DBMS), OOPS, Digital Electronics, Machine Learning, Deep Learning

EXPERIENCE

Smart India Hackathon 2023   *2023*
- Developed a GPS-independent, cluster-based vehicle tracking system using Arduino and RF communication across nodes and clusters.
- Implemented a mesh network to estimate location via signal strength, direction, and timing for use in GPS-restricted environments.
- Integrated real-time data logging into a MySQL database for historical movement analysis and visualization.

Manual Decision-Making Queue Management System   February 2025 – Present
EasyToWork
- Enhanced an existing token system with a manual decision-making queue module using rule-based prioritization (doctor's recommendation, wait time, scan duration)
- Integrated computer vision to detect doctor's recommendations from scanned prescriptions
- Applied machine learning on historical data to assist in suggesting optimized patient calling order
- Integrated seamlessly with the existing token system dashboard, including real-time logging and staff-controlled queue actions

PROJECTS

Liver Cancer Tumor Detection | *Python, Google Colab, CNN, Alexnet, VGG16, Kaggle* | GitHub
- Preprocessed 3D CT liver volumes and segmentation masks (NIfTI format), extracting 2D PNG slices labeled as Tumor/No Tumor
- Trained deep learning models (CNN, AlexNet, VGG16) for binary classification of tumor slices using PyTorch and TensorFlow, Generated bounding boxes from segmentation masks and built a Faster R-CNN object detection pipeline for tumor localization
- Visualized predictions with bounding boxes and confidence scores; deployed and tested model in Google Colab

Herbal Plants Classification | *Python, InceptionNet, Google Colab, Kaggle*
- Developed a deep learning model to classify different types of herbal plants using Convolutional Neural Networks (CNN).
- Utilized InceptionNet architecture for transfer learning to improve accuracy and reduce training time.
- Collected and preprocessed image datasets of herbal plants, applying augmentation techniques to enhance dataset diversity.

CERTIFICATIONS

Walmart USA Advanced Software Engineering Virtual Experience Program | Link   May 2025
- Completed Walmart's Advanced Software Engineering Job Simulation solving complex technical projects across teams
- Developed a novel heap data structure in Java for the shipping department, demonstrating strong problem-solving and algorithms
- Designed a UML class diagram for a data processor with multiple operating modes and database connections.
- Created an entity-relationship diagram for a new database meeting Walmart's pet department requirements.

Technical Skills

Languages: Java, Python, C/C++, SQL, R, MATLAB
Machine Learning & Deep Learning: Scikit-learn, TensorFlow, Keras, InceptionNet, CNN
Developer Tools: Git, IDK, VS Code, Visual Studio, Eclipse
Soft Skills: Critical Thinking, Analytical & Problem Solving, Teamwork, Management