SESHAJALAM G

SOFTWARE DEVELOPER | MACHINE LEARNING ENGINEER | DATA ANALYST

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PROFILE

Master's student in Computer Science with expertise in machine learning, deep learning, and computer vision. Skilled in Python, Java, TensorFlow, OpenCV, and ML frameworks. Experienced in developing CNN-based models, real-time object detection, and data preprocessing. Passionate about building AI-driven solutions to solve real-world challenges.

SKILLS

- **Programming Languages:** Python, Java, C, SQL
- **Machine Learning:** Supervised & Unsupervised Learning, Regression, Classification, Feature Engineering
- **Deep Learning:** CNN, LSTM, Model Optimization, Transfer Learning
- **Computer Vision:** OpenCV, Image Preprocessing, YOLO
- **Data Science & Analysis:** Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn
- **Frameworks & Tools:** TensorFlow, Keras, Flask, Django

EDUCATION

Master of Technology

Vellore Institute of Technology

VIT UNIVERSITY - VELLORE

2023-2025

Computer Science and Engineering Specilization with AIML

CGPA - 7.8

Bachelor of Technology

Kingston Engineering College

2019-2023

Information Technology

CGPA - 8.1

LANGUAGES

Tamil

English

WORK EXPERIENCE

Intern

Teachnook — June-2024- August 2024

- Preprocessed 10,000+ images using CNN, improving model accuracy by 15%.
- Implemented classification and regression models for real-world applications.
- Optimized ML models, reducing training time by 20% through hyperparameter tuning.
- Worked with NumPy, Pandas, Keras, TensorFlow, Matplotlib, and Scikit-learn.

Project

Real time object detection using YOLO v8

Jan-2023 - May 2023

- Developed a real-time object detection system using YOLO with a <50ms response time.
- Implemented optimized anchor boxes, improving object localization accuracy by 12%.
- Deployed a lightweight model for fast inference on edge devices.

Deep Learning approach for Pneumonia detection

June-2024 - Dec 2024

- Designed and trained a CNN-based model using RetinaNet & CheXNet for pneumonia detection.
- Processed 70,000+ chest X-ray images to enhance model performance.
- Achieved 93% accuracy, improving diagnostic efficiency in medical imaging

Hand Gesture Recognition for YouTube Control

Jan 2025 - At present

- Built a CNN-LSTM-based gesture recognition system for automating YouTube playback controls.
- Achieved 95% accuracy on a custom dataset using MediaPipe Hands and OpenCV.
- Implemented 15+ custom gestures with PyAutoGUI for seamless user interaction.

Certifications

- Python - GUVI (2023): Covered OOP, data structures, and algorithms.
- AWS Cloud Practitioner: Hands-on experience in cloud computing & deployment.
- Machine Learning - Teachnook: Built ML models for real-world applications