

SIDDHARTH DHADWAL

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Personal Profile

Motivated Computer Science student with a solid foundation in Deep Learning, Computer Vision, and full ML pipelines. Experienced in building robust AI solutions for image and video recognition, including object detection, facial recognition, and predictive modeling. Proactive self-starter who thrives in collaborative, cross-functional teams and learns fast.

Education

SRM Institute of Science and Technology (SRMIST), Chennai
B.Tech – Computer Science with Specialization in Business Systems
2022 – 2026 | CGPA: 8.82/10

Experience

Computer Vision & ML Intern – Food Corporation of India (FCI)

June 2025 – Present | On-Site

- Developing a scalable computer vision system for real-time counting of food grain bags in warehouses using YOLOv8 for robust object detection and tracking.
- Designed a complete pipeline: overhead camera feed → YOLO-based detection → virtual line-crossing logic → dynamic count updates in a central database.
- Conducting iterative experimentation and benchmarking to optimize detection accuracy and handle edge cases like occlusions and variable stacking.
- Collaborating with cross-functional FCI teams to integrate the solution with warehouse operations for improved efficiency and fraud prevention.

Data Science Intern – Coders Cave

Mar 2024 – Apr 2024 | Remote

- Built and evaluated ML models using TensorFlow and Scikit-Learn for real-world prediction tasks.
- Conducted end-to-end experimentation: data preprocessing, feature engineering, model training, and benchmarking against baseline methods.

Key Projects

Smart AI-Based Attendance System

Tech Stack: Python, TensorFlow, DeepFace (RetinaFace + ArcFace), OpenCV, PostgreSQL

- Engineered an end-to-end Deep Learning pipeline to automate classroom attendance from a single group photo using advanced facial recognition.
- Achieved ~95% face recognition accuracy in varied classroom conditions through rigorous experimentation and failure analysis.
- Benchmarked multiple model configurations and optimized detection modules for real-world robustness.
- Developed extensive testing processes aligned with real-world classroom scenarios to ensure reliable deployment.

AI Career Counsellor (In Progress)

Tech Stack: GPT-3.5, Flask, Firebase Firestore, ElevenLabs API

- Designing an interactive AI-powered conversational agent that guides users through career decisions by combining stealth MBTI-style personality profiling, real-time sentiment analysis, and contextual conversation flow.
- Implementing advanced voice input/output features using the ElevenLabs API, creating a human-like guidance experience that builds trust and engagement.
- Architecting a scalable backend with Firebase Firestore to store conversation memory, track user traits, and refine personalized recommendations over multiple sessions.

Certifications

Deep Learning: Recurrent Neural Networks – Udemy (Jan 2025)

Ensemble Machine Learning in Python – Udemy (Jan 2025)

AWS Academy Machine Learning Foundations – AWS (Feb 2024)

Complete Machine Learning & Data Science Bootcamp – Udemy (Sep 2023)

Skills

Deep Learning & Computer Vision: TensorFlow, Keras, YOLOv8, DeepFace, ArcFace, OpenCV

ML & DS: Python, Scikit-Learn, Pandas, NumPy, Data Preprocessing, Model Evaluation,

Use Cases: Object Detection, Text Recognition (basic research)

Tools: Jupyter Notebook, Google Colab, VS Code, Git

Backend: SQL, PostgreSQL, REST APIs

Frontend: HTML5, CSS3, JavaScript