Sabbu Sashidhar

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PROFESSIONAL SUMMARY

Aspiring AI/ML Engineer and Python Developer with hands-on experience in real-time systems like sleep detection and lane tracking. Proficient in Python, TensorFlow, OpenCV, and automation tools. Certified by IBM and Google in ML and Python. Passionate about building practical, scalable AI solutions.Experienced in automating workflows using tools like n8n, Selenium.

TECHNICAL SKILLS

Languages: Python, C++, Java

Libraries/Frameworks: TensorFlow, Keras, PyTorch, OpenCV, Scikit-learn

Tools: Git, Raspberry Pi, Tkinter, Figma, n8n, docker

Web Technologies: HTML, CSS, JavaScript, React.js, wordpress

Other: PyAutoGUI, Selenium

EDUCATION

B.Tech in ECE - AIML   **Jul 2020 – Apr 2024**
GITAM University, Bengaluru   *CGPA: 7.2*

12th Grade - MPC   **Jun 2018 – Apr 2020**
Narayana Junior College, Anantapur   *CGPA: 7.44*

INTERNSHIP EXPERIENCE

Technical Contributor   **Nov 2023 – Oct 2024**
RetroSafe Innovations

- Built a drowsiness detection system with statistical-based face tracking for day and night conditions.
- Implemented and tested the solution on a Raspberry Pi for real-time deployment.
- Maintained modular scripts for camera-based and image-based tracking (statistical.py, full_face.py, etc.).

Machine Learning Intern   **May 2023 – Jul 2023**
AICTE

- Applied classification and regression techniques on sample datasets using Python and scikit-learn.
- Reinforced understanding of ML workflows through experimenting.

Programming Intern   **Apr 2023 – Jun 2023**
PHN Technology

- Completed a virtual internship focused on programming languages with hands-on coding exposure.
- Actively contributed to tasks involving practical application of core programming concepts.

ML Intern   **Feb 2023 – Apr 2023**
Acmegrade

- Completed foundational training in machine learning with practical implementation using Python.
- Built and trained a CNN model on the MNIST dataset using TensorFlow and Keras.
- Gained experience with supervised learning, model tuning, and evaluation techniques.

PROJECTS

WhatsApp Automation with Google Sheets | *n8n, Docker, Google Sheets, Evolution API*

- Designed and deployed an automated WhatsApp messaging system using the open-source `evolution-api` inside Docker containers with PostgreSQL and Redis backends.
- Integrated Google Sheets via n8n to dynamically fetch and schedule WhatsApp group messages based on timestamp logic using conditional and wait nodes.
- Managed complex environment using `docker-compose`, handling inter-service communication (Postgres, Redis, MinIO, Webhook, RabbitMQ) within an isolated Docker network.
- Secured API access using environment-level authentication keys and configured cloud S3-like object storage (MinIO) for media handling.

Sleep Detection System | *Python, OpenCV, CNN, TensorFlow*   **GitHub**

- Developed a drowsiness detection application using statistical-based face tracking for varying lighting conditions (day and night).
- Implemented separate modules for live camera and image-based face monitoring (statistical.py, statistical_night.py, etc.).
- Deployed and tested the system on a Raspberry Pi for real-time, edge-based inference.
- Included visual variants (full_face.py) to enhance real-time feedback during face tracking.

Lane Detection for Self-Driving Cars | *Python, OpenCV, Computer Vision*   **GitHub**

- Built a lane detection system optimized for Indian road conditions using deep learning and image processing.
- Used daytime and nighttime models trained to handle varied lighting environments.
- Integrated YOLOv5 for object detection with real-time audio alerts like "Keep Left" and "Vehicle Ahead."
- Developed scripts for video-to-frame conversion, image-based lane tracking, and enhanced detection with lane_images2.py.

Custom WhatsApp GUI | *HTML, CSS, JavaScript, PHP, SQL*   **GitHub**

- Built a basic web-based chat app mimicking WhatsApp's interface, focused on group messaging.
- Allowed users to join with any name using a shared group password (no individual authentication).
- Handled messaging logic, UI updates, and simple database storage for real-time-like interaction.

Portfolio Website | *HTML, CSS, JavaScript, GitHub Pages*   **Live Site**

- Built responsive personal portfolio website showcasing projects and skills, hosted on GitHub Pages

CERTIFICATIONS

Machine Learning Specialization - IBM (Feb 2023)

Building Chatbots with IBM Watson - IBM (May 2023)

Foundations: Data, Data Everywhere - Google (Jan 2023)

Crash Course on Python - Google (Dec 2022)

Python Basics - HackerRank (Nov 2022)

OOP in Java - Udemy (Oct 2022)

Robotics Workshop - GITAM (Sep 2022)

Effective Problem Solving - UCI (Aug 2022)