DHANUPRIYA A
PYTHON AND AI DEVELOPER

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PROFESSIONAL SUMMARY

Python/AI developer with **3 years of experience** building intelligent search applications and creating significant solutions in the fields of enterprise search, healthcare, and surveillance. Led end-to-end development of face recognition-based attendance systems and LLM-powered analytics platforms that enhanced decision-making. Strong background in automating unstructured data pipelines, document intelligence, and real-time anomaly detection using modern AI and cloud architectures. renowned for creating user-focused, safe, and scalable solutions that combine cutting-edge data engineering and machine learning with business requirements.

WORK EXPERIENCE

Python/ML Developer - Texila Educare Healthcare and Technology Enterprise Pvt., Coimbatore — May 2025 – Present

- led the creation of an attendance tracking system that integrates real-time CCTV stream processing and is powered by AI for face detection and recognition.
- developed a prototype that used ArcFace for feature embedding, YOLOv8 and MediaPipe for face detection, and FAISS for quick identity matching and similarity search.
- optimized frame handling pipelines, deduplication logic, and CSV-based audit logging to guarantee precision and effectiveness. identity confirmation.
- High recognition accuracy was achieved during development and testing on sample datasets; live stream stability and latency are currently being improved.
  handling, and the robustness of the system for deployment in production.
- Utilized intelligent video analytics to increase workplace security, reduce manual tracking, and enhance attendance accuracy.

Face Recognition Attendance Tracking System from CCTV Surveillance is a GitHub reference.

Python/ML Developer - PBS Info Systems Pvt Ltd, Madurai — Jan 2024 – Apr 2025

- created and put into use enterprise-grade AI and data solutions that combine cloud-native technologies, generative AI, and Snowflake to provide real-time business intelligence and automation.
- developed the first-ever real-time ETL pipeline for Document AI ingestion and validation using Snowflake, allowing for automated vendor document extraction, metadata-driven validation, and operational monitoring through a Streamlit LiveView dashboard.
  Document AI Pipeline GitHub.
- created a hybrid semantic search platform with a generative AI interface that provides context-aware search for structured and unstructured enterprise data by utilizing Snowflake Cortex Search, Arctic Embed, and LangChain. **Cortex Search GitHub**
- created LLM-powered Text-to-SQL tools (Cortex Analyst), which are closely integrated with Snowflake for safe, real-time analytics and allow non-technical users to query complex datasets using natural language. **Cortex Analyst GitHub**.
- developed a Cortex Agent platform (FastAPI + React) that enables safe and interactive enterprise data exploration through YAML-driven schema routing, JWT-based authentication, and real-time visualizations. **Cortex Agent GitHub**.
- developed forecasting and anomaly detection pipelines for time series in Snowflake, using supervised and unsupervised models to find anomalies in financial transactions. **Anomaly Detection GitHub.**
- Using Apache Airflow and Azure Blob Storage, I designed and coordinated Python-based ETL processes for the large-scale, high-throughput ingestion and transformation of Parquet/JSON datasets.
- Enhanced memory efficiency, query performance, and downstream visualization through optimized chunk-based processing and nested JSON flattening.

☑ **Published by Snowflake in their official Quickstart guide: Document AI Pipeline Automation – Snowflake Quickstart**.

Junior Python Developer - Dot Com Infoway Ltd., Madurai **Sep 2022 – December 2023**

- created an AI-powered chatbot with a focus on women's safety and health using Django, natural language processing, and OpenAI's LLM. It included voice-to-text accessibility for inclusive user interaction and keyword/topic filtering for responsible AI behavior.
- identified and fixed important SMTP configuration problems for the website of AkshayaIndia, restoring the delivery of outgoing emails, guaranteeing audit compliance, and enhancing client correspondence.
- created an ImageUpscale platform that uses OpenCV, NumPy, and deep learning models (EDSR) to improve low-resolution images up to 8x without sacrificing detail or sharpness.
- To make sure solutions satisfied functional, performance, and compliance requirements, I worked with cross-functional teams.
- produced Python apps that are ready for production, with thorough documentation and tried-and-true processes that guarantee scalability and maintainability.

EDUCATION

- 79% of students enrolled in The American College's Master of Computer Applications (MCA) program from 2019 to 2022
- 79% of students at E.M.G. Yadava Women's College earned a Bachelor of Computer Applications (BCA) between 2016 and 2019.

SKILLS & COMPETENCIES

- **Programming Language**: Python
- **Machine Learning & AI: ML Algorithms**: Classification, Regression, Forecasting
- **AI Concepts:** NLP, LLM Integration, Document AI, Hybrid Search
- **Anomaly Detection:** Time-Series, Rule-Based, and Unsupervised Models
- **Facial Recognition**: YOLOv8 (detection), MediaPipe, ArcFace (embedding), FAISS (vector similarity search)
- **Snowflake ML & AI:** Cortex Agent, Cortex Analyst, Cortex Search, Cortex Complete
- **ETL & Data Pipelines:** Apache Airflow, Parquet, Chunk-Based File Handling, JSON Flattening, Metadata-Driven Validation
- **API Development:** FastAPI, OpenAPI, JWT Authentication, RestAPI
- **Web & UI Development:** Streamlit, Django, React (basic)
- **Visualization & Dashboards:** Real-Time Charts, Interactive Analytics Interfaces
- **Databases**: SQL, MySQL, Snowflake
- **Cloud Platforms**: Azure Blob Storage
- **Computer Vision & Video Analytics:** Live CCTV Stream Processing (OpenCV, FFmpeg), Real-Time Face Detection & Recognition (YOLOv8, ArcFace, FAISS), CSV Logging (Pandas, CSV module), Frame Optimization (OpenCV, NumPy), Deduplication Logic (custom Python algorithms, FAISS vector comparison)
- **Operating Systems/Environments:** Windows, Ubuntu (Linux-based development, environment setup, package management, deployment)
- **Development Tools**: Visual Studio Code, Jupyter Notebook, Google Colab, Apache Airflow UI, Streamlit

ACHIEVEMENTS

- Recognized for successfully implementing Enterprise Search at PBS Info Systems; published **Transforming Enterprise Search with AI Using Snowflake Cortex Search** on Medium. (2024)
- Awarded "**New Technology Enthusiast**" (2023) by DCI Company.
- Recipient of the **Academic Proficiency Certificate of Merit Award** at E.M.G. Yadava Women's College (2019).