Nitin Singh

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Resume Objective

Aspiring AI Engineer with hands-on experience in machine learning, computer vision, and generative AI. Adept at building intelligent systems, model deployment pipelines, and solving complex problems through data. Looking to contribute to innovative Al-driven solutions in a collaborative environment.

Education

Uka Tarsadia University | Surat, Gujarat

B. Tech Artificial Intelligence & Data Science (Completed 8th Semester with 10.0 SGPA) Sep 2021 - Expected May 2025

Agg. CGPA: 8.68

Experience

Al/ML Intern | JBcodeapp, Surat, Gujarat

May 2024 - June 2024

Project: Student Performance Analysis | Python, Numpy

- Applied MLOps concepts to create a robust machine learning pipeline.
- Developed Python backend processing 5,000+ student records with 98.5% data integrity through efficient ETL processes.

Al/ML Trainee | AlgoBrain Al, Surat, Gujarat

Sep 2023 - Jan 2024

Project: Movie-Ticket Booking Chatbot | DialogFlow CX

- Built a demo Movie-Ticket Booking Chatbot in DialogFlow CX.
- During the internship, I explored the practical implementations of Time Series Analysis, moving averages and techniques like ARIMAX, SARIMAX, ARIMA, etc.
- Identified and resolved 30+ critical bugs across 4 web applications through systematic testing methodologies.

Al/ML Engineer Intern | ELaunch Solution Pvt. Ltd., Surat, Gujarat

Dec 2024 - Present

- Engineered a face detection and image search system achieving 92% accuracy using OpenCV and custom CNN architecture.
- Architected and fine-tuned a Transformer-based deep learning model reducing validation loss by 80% (from 0.7685 to 0.1510).
- Orchestrated version control workflows with Git/GitHub, reducing merge conflicts through strategic branching strategies.

Projects

Vaccine Uptake Prediction Model | Numpy, Sklearn, Random Forest Algorithm

Github Link

- Developed a dual-prediction model to forecast individual likelihood of receiving XYZ and seasonal flu vaccines.
- Achieved 87% accuracy in predicting XYZ vaccine uptake, 23% above baseline.
- The goal of this project is to predict the likelihood of individuals receiving two types of vaccines.

Object Detection and Distance Measurement | Computer Vision, YOLOv5, pyttsx3

Github Link

- Developed a real-time object detection system using YOLOv5x model to detect multiple objects in dynamic environments.
- Implemented custom distance measurement algorithm.
- Integrated the system with speech output for real-time feedback.
- enhancing usability in practical applications like autonomous navigation.
- Achieved 92.7% accuracy in distance measurements within 10 meters range.

Face Recognition Web Application (Find You) | RetinaFace, Facenet

Github Link

- This is a Flask-based web application for face recognition. Users can upload or capture photos to find matched faces from a dataset. The app also provides options to download all matched photos as a zip file.
- Ensuring Proper Security implementation by adding feature "Authorized access only by Password-Protected-Link".
- Achieved 96.3% face recognition accuracy on a diverse dataset of 500+ images.

Compliance Checker | LLM, Vector Database, PostgreSQL

Github Link

- Developed an Al-driven application for contract compliance verification.
- Implemented PostgreSQL with **pgvector** reducing similarity search time by **65%** compared to traditional methods.
- Integrated **OpenAI** models for generating and comparing document embeddings in a unified database architecture.

Technical Skills

Languages: Python, C/C++ (basic)

Cloud & Tools: Azure, GCP (GenAl Study Jam 2024), HuggingFace, Git

Other Tools: FastAPI, Flask, DialogFlow CX, OpenCV, YOLOv5

Technical: Machine Learning, Deep Learning, OOP, Data Science, Computer Vision, NLP, GenAl

Extracurricular Achievements

- Winner in Quiz(Group) Competition at College Fest 2023
- 2nd Runner-Up in Script Writing(Solo) at College Fest 2023
- Selected in Finnovate and Amalthea Hackathons by IITGN
- Selected in the Perplexity Al Business Fellow Program 2025
- Participated in Google Cloud Gen Ai Study Jam 2024
- Selected in Gsoc Extd 2024 as a Contributor.
- Participated in Bhartiya Antriksh Hackathon 2024 by ISRO.
- Runner Up in TattvaHackathon-2025 organized by CGPIT.

Extracurricular Activities

Member | Swaayan Drone Club, SVNIT, Surat, Gujarat

June 2024 - Present

• Built and Assisted for Drone Bootcamps by building and calibrating drones using beta flight and mission planner.

User Software Tester (Part-Time) | Nothing India, Remote

Feb 2023 - Present

• Conducted user trial testing for Nothing Phone 1, Nothing Phone 2, Nothing 2a, Android 14, Cmf Watch, and more.

Summer Analytics | IIT Guwahati, Online

July 2024 - Aug 2024

Successfully completed Summer Analytics 2024 Program with top 10 ranking out of all participants.

Aspire Leaders Program | Aspire Institute, Harvard Business School, Online

Aug 2024 - Nov 2024

• Completed all modules in Leadership, Communication, and Problem-Solving.

Al Business Fellow | Perplexity, Online

Feb 2025 - Present

Selected in the Perplexity Al Business Fellow Program 2025.

Certifications

- Python for Data Science by NPTEL.
- Recent Advancements in AI and Robotics by SVNIT.
- Completed AI/ML for GeoData Analysis by ISRO.
- BOOT CAMP 8.0 on Drone Technology and Applications by SVNIT.
- Completed Advanced Data Analytics Capstone course by Google.
- Completed ML an Overview from Coursera.