

# SHUBH SATHWARA

AI / ML Engineer • Data Scientist

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## PROFESSIONAL SUMMARY

Final-year B.Sc. Computer Science student specialising in AI & ML, with practical experience building machine learning models, computer vision pipelines, and NLP systems. Skilled in Python, TensorFlow, PyTorch, and Scikit-learn, with exposure to LLMs, RAG, and deep learning. Comfortable working across the full ML workflow — from data cleaning and feature engineering to model training, evaluation, and improvement. Eager to apply these skills in a team that builds real, impactful AI products & gaining hands-on experience & contribute towards my learning.

## TECHNICAL SKILLS

|                                   |                                                                                                                                                        |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Languages & Query:                | Python, SQL, Excel                                                                                                                                     |
| ML / DL Libraries:                | Data Cleaning & Preprocessing, Model Evaluation, OpenCV, MediaPipe                                                                                     |
| Soft Skills:                      | Team Collaboration, Continuous Learning, Creative Thinking, Time Management, Communication,                                                            |
| Data Analysis & BI Visualisation: | Numpy, Pandas, Matplotlib, Seaborn, PowerBI, Tableau, Figma                                                                                            |
| Databases & Cloud:                | MySQL, AWS S3 & AWS Services (Basic), Google Colab                                                                                                     |
| Dev & AI Tools:                   | ChatGPT, Claude, Gemini, Perplexity, Hugging Face, Cursor, Grok, AntiGravity, Github                                                                   |
| AIML Concepts:                    | Supervised / Unsupervised Learning, ANNs, CNNs, RNNs, Model Learning, Feature Engineering, Model Evaluation, Computer Vision, NLP, LLMs, MLOps (Basic) |

## EXPERIENCE

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| <b>AI/ML Trainee (Internship-Track)</b> — TOPS Technologies, Ahmedabad                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Jul 2025 – Present |
| <ul style="list-style-type: none"><li>Gained hands-on exposure to core AI/ML concepts including Python, Machine Learning, Deep Learning, NLP, Computer Vision, LLMs, RAG, and basic MLOps.</li><li>Practiced building simple machine learning models on real datasets as part of training assignments and improved results through basic feature engineering.</li><li>Worked in a team project on a startup idea and proposed how AI can be integrated into real-world business solutions.</li><li>Explored LangChain and RAG concepts by building a basic document-based question-answering system.</li></ul> |                    |

## PROJECTS

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| <b>Trainsight — Real-Time Fitness &amp; Posture Correction</b>   Python • OpenCV • MediaPipe • YOLOv4 • Deep Learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <ul style="list-style-type: none"><li>Engineered a real-time computer vision pipeline using OpenCV and MediaPipe to track 33 body landmarks and detect incorrect exercise form via webcam.</li><li>Integrated YOLOv4-based pose detection models to classify workout posture across <b>5 exercise categories</b> with frame-level feedback.</li><li>Optimised inference speed to achieve <b>~24 FPS</b> on standard CPU hardware through model quantisation and frame-skipping logic.</li><li><b>Published</b> a research case study on Trainsight in <b>IEEE</b> during the final-semester project review — documenting methodology, results, and future scope.</li></ul> |
| <b>Spam Email Classification System</b>   Python • Scikit-learn • NLP • TF-IDF • Naive Bayes • Logistic Regression                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <ul style="list-style-type: none"><li>Designed an end-to-end NLP pipeline: data cleaning, tokenisation, stopword removal, and TF-IDF feature extraction on <b>5,000+ labelled emails</b>.</li><li>Benchmarked Naive Bayes vs Logistic Regression; LR model achieved <b>96% accuracy</b> and <b>0.97 AUC-ROC</b> on held-out test data.</li></ul>                                                                                                                                                                                                                                                                                                                           |

- › Added cross-validation (5-fold) and confusion matrix analysis to validate model robustness and reduce false-negative spam leakage.

#### Django Blog Web Application | *Python • Django • HTML/CSS • SQLite • REST*

- › Built a full-stack blog platform featuring user authentication (registration, login, JWT session), CRUD post management, and tag-based filtering.
- › Designed a responsive, mobile-friendly UI; integrated SQLite backend with Django ORM for efficient data retrieval and user management.
- › Implemented paginated API views and deployed the app locally with Gunicorn, demonstrating backend-to-frontend integration skills.

## EDUCATION

### B.Sc. Computer Science

2022 – 2026

Karnavati University, Ahmedabad | CGPA: 6.5 – 7.0

**Relevant coursework:** *Data Structures & Algorithms, Database Management, Probability & Statistics, Operating Systems, Software Engineering*

### Diploma — Data Science with AI

Jul 2025 – Aug 2026

TOPS Technologies, Ahmedabad

**Modules:** *Python, ML, DL, NLP, LLMs, RAG & Fine-Tuning, Agentic AI, Computer Vision, Power BI, SQL, MLOps*

## CERTIFICATIONS

- › **AWS Academy Graduate — Cloud Foundations** (Amazon Web Services, 2025)
- › **Building Deep Learning Models with Keras** (LinkedIn Learning, 2025)
- › **Deep Learning for Image Recognition** (LinkedIn Learning, 2025)
- › **LLM: Text Classification for NLP using BERT** (LinkedIn Learning, 2025)
- › **Learning Cryptography & Network Security** (LinkedIn Learning, 2025)
- › **Ethical Hacking: Cryptography** (LinkedIn Learning, 2025)

## ACHIEVEMENTS & EXTRACURRICULARS

- › **IEEE Publication:** Authored and presented a research case study on Trainsight (AI-based Gym Posture Correction) during the final-semester project.
- › **Hackathon:** Competed in a 36-hour college hackathon — ideated, prototyped, and demoed a working product under tight deadlines, earning recognition from judges.
- › **GITEX Global, Dubai:** Selected to attend the workshop, gaining first-hand exposure to cutting-edge AI/ML products, industry leaders, and global tech trends.
- › **Event Leadership:** Co-ordinated AriaRO and VIAJE at Karnavati University — managed esports competitions, coding fun-play events, and student engagement for 300+ attendees.
- › **TEDx & Youth Parliament:** Participated in TEDxKarnavati and the Youth Parliament of India, developing public-speaking, leadership, and social-awareness skills.
- › **Literature & Design:** Attended the Ahmedabad Literature Festival and Ahmedabad Design Week, gaining exposure to design thinking and creative industry perspectives.

## LANGUAGES

**English** — Professional Working Proficiency | **Hindi** — Native | **Gujarati** — Native