SAURABH SINGH

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EDUCATION

Noida Institute of Engineering and Technology, Greater Noida, India	**2022 - Present**
Bachelor of Technology, Computer Science & Engineering (Data Science)	CGPA: 7.09

- Relevant Coursework: Data Structures, Algorithms, Operating Systems, DBMS

Sunbeam School, Robertsganj, India	**2020 - 2022**
Intermediate	Percentage: 68%
Sunbeam School, Robertsganj, India	**2018 - 2020**
High School	Percentage: 87%

PROJECTS

Gumshuda Rescue – AI-Powered Facial Recognition System for Missing Person Tracking

Technologies: Python, Django, OpenCV, Face Recognition, HTML, CSS, JavaScript, Cython, PostgreSQL

- Developed a full-stack web platform achieving **98.5% facial recognition accuracy** using Django and OpenCV to identify missing persons from live and recorded video streams.
- Engineered an automated notification system using Django signals, slashing the alert time for positive matches to families and law enforcement from hours to **under 10 seconds**.
- Designed a secure PostgreSQL database to manage sensitive data for **over 1,000 user profiles**, encrypting all Personally Identifiable Information (PII) and case details.
- Built a comprehensive admin dashboard enabling real-time management of **hundreds of active cases**, centralizing status updates, evidence logs, and communication.

Heart Disease Prediction – Machine Learning-Based Diagnostic Web App

Technologies: Python, Flask, scikit-learn, Cython, HTML, CSS, Render

- Achieved **91% prediction accuracy** in identifying heart disease risks by training and evaluating 4 different supervised learning models from scikit-learn.
- Preprocessed and trained the model on a public health dataset containing **1,000+ patient records** and **13 clinical features**, applying data cleaning and feature engineering to enhance model performance.
- Developed a user-friendly interface using HTML/CSS and Flask that delivers a complete risk assessment in **under 2 seconds** after data input.
- Optimized prediction algorithms with Cython, achieving a **40% reduction in model inference time** compared to pure Python and deployed the final app on Render.

Lexa AI Assistant – Voice-Activated Personal AI with Built-in Productivity Tools

Technologies: Python, SpeechRecognition, pyttsx3, Google API, Cython, Jupyter Notebook

- Engineered a voice-interactive AI assistant with a **97% speech recognition accuracy rate** for reliable hands-free operation and natural human-AI conversation.
- Integrated **5 core productivity tools** (Calendar, Email, Contacts, Web Search, Wikipedia) using Google APIs to automate common daily tasks for users.
- Built a modular architecture capable of executing over **30 unique voice commands** for tasks like scheduling meetings, retrieving contacts, sending emails, and fetching information.
- Reduced command processing latency by **50%** by converting critical Python functions to Cython, ensuring seamless real-time interaction without noticeable lag.

SKILLS

- **Languages:** Python, Java, R, HTML, CSS
- **AI/ML/DS:** Data Visualization, Prompt Engineering, Supervised/Unsupervised Learning Algorithms
- **Libraries and Frameworks:** TensorFlow, PyTorch, NumPy, Pandas, Matplotlib, Keras, Scikit-learn, Seaborn, BeautifulSoup
- **Database:** SQL, MongoDB
- **Mathematics:** Algebra, Probability, Statistics, Calculus, Matrices
- **Tools and Software:** Git, Docker, AWS