

# SHIGIL S

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## SUMMARY

Passionate about working with data to uncover insights that drive informed business decisions. Equipped with strong expertise in Python, SQL, MS Excel, Power BI, and Machine Learning, along with a foundational understanding of Deep Learning. Skilled in manipulating, visualizing, and interpreting complex datasets. Leveraging a Master of Computer Applications and hands-on experience with real-world data to extract meaningful patterns and deliver data-driven solutions.

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## INTERNSHIP

**Data Scientist Intern , iNoesis Technologies Pvt Ltd**

**June 2024 - March 2025**

- Experience in analyzing data using Python, MySQL, and Machine Learning techniques, utilizing statistical methods and Power BI for in-depth insights.
- Developed and presented a Sales dashboard for VadaaMalar Ethnic Indian store during an internship, with regular reporting on technical and interpersonal progress to the team leader."

**Python Developer Intern, Kriha IT Solutions**

**April 1, 2025 - April 30, 2025**

- Developed and deployed a Face Recognition API using FastAPI and face\_recognition, enabling accurate image-based identity verification with match percentage and distance scoring.
  - Built a real-time Drowsiness & Yawning Detection system using OpenCV and MediaPipe, integrating EAR/MAR metrics to trigger alerts and log fatigue events.
  - Collaborated with cross-functional teams to ensure smooth API integration, handled base64 image processing, and implemented error handling and CORS for secure, scalable backend services.
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## EDUCATION

**Master of Computer Application - SRM University, Chennai**

**June 2022 - May 2024**

- CGPA: 8.91

**Bachelor of Science in Computer Science-Guru Nanak College, Chennai**

**June 2017 - May 2021**

- CGPA: 8.3
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## TECHNICAL SKILLS

- **Programming & Scripting:** Python (NumPy, Pandas, Matplotlib, Seaborn), SQL (MySQL)
- **Data Analysis & Visualization:** Power BI, MS Excel, Python (Pandas, Seaborn, Matplotlib), Statistics
- **Web & API Development:** FastAPI
- **Computer Vision:** OpenCV, MediaPipe, Face Recognition, Real-time video processing
- **Machine Learning:** Supervised/Unsupervised Learning, Scikit-learn (Model building, evaluation)
- **Deep Learning (Basics):** Neural Networks, Image encoding, CNN fundamentals
- **Operating Systems:** Ubuntu (Linux environment, terminal-based development)

## PROJECTS

### Predictive Modeling Of Indian Elections Using Machine Learning

- Utilized Machine Learning to analyze the Indian Election dataset, building predictive models to identify key factors influencing outcomes and forecast results based on historical data.
- Applied data preprocessing, feature engineering, and model evaluation techniques to enhance the accuracy of election outcome predictions, leveraging historical trends and patterns in the dataset.
- Employed visualization tools to present insights, making complex data easily interpretable for strategic decision-making.

### **Face Recognition API (FastAPI + face\_recognition)**

- Developed and deployed a robust facial recognition using FastAPI and the face\_recognition library for real-time image comparison via base64-encoded inputs.
- Implemented face distance calculation with automatic match decision based on a confidence threshold, returning match percentage and distance.
- Handled image decoding, facial feature extraction, and error handling for invalid inputs or missing faces.
- Collaborated with Java backend team to ensure smooth integration and successful testing via Postman and third-party tools.
- Applied CORS policy, payload validation, and modular architecture using Pydantic schemas and route controllers.

### **Drowsiness & Yawning Detection System (OpenCV + MediaPipe)**

- Designed a real-time drowsiness detection system using OpenCV and MediaPipe, leveraging eye aspect ratio (EAR) and mouth aspect ratio (MAR) to detect blinking and yawning.
- Triggered alert sounds and logged events (drowsiness/yawn) in JSON format, integrating webhook support for automation.
- Optimized detection accuracy for multiple faces using max\_num\_faces, with frame-by-frame webcam analysis.
- Handled edge cases such as no face detected and partial face visibility using conditional logic and thresholds.
- Contributed to road safety-focused R&D by enabling automated voice and visual warnings for driver fatigue.

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## CERTIFICATIONS

### **Data Science and Machine Learning Certification**

- Illionis Tech(US),Entri Elevate |2023-2024
- Mastered Python, NumPy, Pandas, Matplotlib, and Seaborn for data manipulation and visualization.
- Applied Machine Learning algorithms and statistical techniques for predictive analytics and data-driven decision-making.
- Utilized MySQL and Power BI for data extraction, transformation, and insightful reporting.

### **Microsoft Excel Certification Entri Elevate | July 2024**

- Developed proficiency in advanced Excel functions, including VLOOKUP, INDEX/MATCH, and complex formulas.
- Created dynamic dashboards and reports using pivot tables, charts, and data visualization techniques.
- Automated data processing tasks through macros and conditional formatting for improved efficiency.