

# SHOURYA SAXENA

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## EDUCATION

### VIT Bhopal University

*B.Tech. Computer Science and Engineering – CGPA: 8.1*

Bhopal, MP

*Nov 2022 – Present*

## TECHNICAL SKILLS

Python, C++, SQL, HTML/CSS, JavaScript, Scikit-learn, Pandas, NumPy, TensorFlow, Jupyter Notebook, Git, GitHub, Hugging Face

## PROJECTS

### Neural Network From Scratch — Python, NumPy, Jupyter

*May 2025*

- Built forward propagation, backpropagation, SGD, and cross-entropy loss entirely in NumPy without high-level ML libraries.
- Achieved 85% validation accuracy on MNIST with a 3-layer fully connected architecture.
- Modularized components (layers, activations, optimizers) for extensibility and educational reuse.
- Produced notebook visualizations of weight updates and loss convergence for pedagogical clarity.

### Emotion Detection and Sentiment Analysis — Python, OpenCV, Keras, CNN

*Mar 2024 – May 2024*

- Led team of three to design and prototype a mouse-like assistive interface concept for quadriplegic users (early exploration).
- Developed real-time facial emotion recognition using OpenCV + custom CNN architecture (convolution + pooling stacks).
- Integrated Haar cascades for efficient face localization in live webcam feeds.
- Engineered pipeline: capture frame → detect face → preprocess ROI → predict emotion → overlay label in real time.

### Deal Stage Stagnation Early Warning — Python, Pandas, Seaborn, scikit-learn

*Aug 2025*

- Engineered a pipeline “micro-churn” radar computing  $risk\_score = stage\_age / median(stage)$  to surface silent stalled deals earlier than static age views.
- Automated scoring + Markdown executive report + visualizations (age distribution, risk thresholds, inactivity scatter), flagging **15** stagnant (**5** critical) deals in synthetic dataset.
- Implemented modular CLI (generate-data / run / report / plot / model) and GitHub Action for daily artifacts, enabling reproducible one-command analysis.
- Added optional logistic regression predicting 7-day stage advancement (features: stage age, inactivity); achieved **AUC 0.78** on synthetic labeled samples (baseline 0.50).

## CERTIFICATIONS

### NPTEL Marketing Analytics — Certificate

## EXTRA-CURRICULAR

**Marketing Lead, Rajasthan Club** — Delivered 250 registrations within 48 hours via targeted multi-channel promotion; exceeded 500 total attendees and coordinated a 15-member crew.