🖥️ Technical Skills & Projects

🌐 Web Development

- **Frontend:** React.js, Tailwind CSS, HTML5
- **Backend:** Node.js, Express.js
- **Full-Stack:** MERN (MongoDB, Express, React, Node)
- **Tools:** REST APIs, Git, GitHub, Netlify

Project: [EXAM BOOSTER – JEE/NEET Practice App](#)
A full-stack web app built using the MERN stack that helps students prepare for competitive exams. It features mock tests, result visualization, and progress tracking.
Skills Used: React, Express.js, MongoDB, Node.js, REST API

🤖 Machine Learning & Deep Learning

- **Frameworks:** PyTorch, TensorFlow, Keras
- **Concepts:** CNNs, RNNs, VAEs, Q-learning, Reinforcement Learning
- **Tools:** Scikit-learn, NumPy, OpenCV, Google Colab

Project: [Sketch2Image UNet](#)
Developed a custom UNet architecture to convert line-art sketches into realistic images. The network learns semantic mapping from sparse pixel data.
Skills Used: PyTorch, Deep Learning, Computer Vision, UNet Architecture

Project: [Automatic Image Captioning & Speech Synthesis for Blind People](#)
Built an end-to-end pipeline combining CNN + RNN-based image captioning with text-to-speech, making image interpretation accessible for visually impaired individuals.
Skills Used: TensorFlow, Keras, NLP, TTS, OpenCV, LSTM, VGG16

Project: [Q-learning Route Optimizer](#)
Used reinforcement learning to optimize delivery routes in urban areas. The model learns to minimize delivery time by rewarding the most efficient paths.
Skills Used: Q-learning, Reinforcement Learning, Python, GridWorld

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📊 Data Analysis & Visualization

- **Libraries:** Pandas, Matplotlib, Seaborn
- **Tools:** Power BI, Google Sheets Scripting
- **Techniques:** EDA, Time Series Analysis, Feature Engineering

Project: [Breaking the Silence](#)
A data analysis project on rape cases across India, this project explores temporal and geographic patterns, revealing actionable insights using dashboards and visual storytelling.
Skills Used: Pandas, Seaborn, Power BI, Data Cleaning, Data Visualization

📈 Internships & Real-World Experience

🏢 NoQs Digital (Data Analyst Intern)

- Created data extraction tools using Google Apps Script and Python

- Built interactive dashboards in **Power BI**, helping department heads understand trends

- Earned the **Star Intern Award**
  Skills Applied: Google Sheets Automation, Power BI, TensorFlow, Data Pipeline Automation

🏛 TIH-IoT, IIT Bombay (Project Intern under Chanakya Fellowship)

- Designed a hybrid **VAE + 1D-CNN** model for real-time tool condition monitoring

- Built a full-stack dashboard using **MERN**, deployed on local servers

- Tech Stack: PyTorch, MQTT, React, MongoDB, Spark
  Skills Applied: PyTorch, Deep Learning, MERN Stack, MQTT, Time-Series Analytics