

# Aaryaman Shinde

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## EDUCATION

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### **SVKMs' Dwarkadas .J Sanghvi College of Engineering at vile parle, Mumbai.**

Bachelor of Technology (B.Tech.) in Mechanical Engineering

May 2026

Selected Coursework: Structured Programming Using C, Object Oriented Programming Using Java, Python for Mechanical Engineering, Database Management System, Data analytics

## SKILLS

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*Languages:* C, C++, Java, Python, HTML, CSS, LaTeX

*Technologies & Frameworks:* TensorFlow, NumPy, Pandas, Scikit-learn, Prophet, RandomForest

*Machine Learning:* Supervised Learning, Unsupervised Learning, Neural Networks, Deep Learning, FFT, ARIMA, Minimax, Alpha-Beta Pruning

*Database Management:* MySQL

## PROJECTS

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### *Data Analysis Project at Tata Power*

- Analyzed large datasets to match irradiance levels with generation and module temperature data, removing anomalies and visualizing trends over various timeframes.
- Utilized Python for data analysis, API integration, and created visualizations to present insights.

### *String Monitoring Dashboard at Tata Power*

- Developed an interactive dashboard using Streamlit for monitoring the status of String Combiner Boxes (SCBs) in solar PV cells.
- Implemented features for date selection, multiple SCB plotting, and data visualization.

### *MNIST Digit Recognition from Scratch*

- Built a neural network from scratch to recognize handwritten digits from the MNIST dataset using NumPy, achieving a training accuracy of 93.56%. and a loss of 0.2244
- Implemented visualization of model predictions alongside sample images, demonstrating strong understanding of neural network fundamentals and practical model evaluation.

### *Connect Four AI with Minimax and Alpha-Beta Pruning*

- Developed an AI for Connect Four using the Minimax algorithm with Alpha-Beta Pruning, optimizing decision-making to play optimally against human opponents.
- Created the game environment and AI logic using Pygame, including visualizations to showcase the AI's strategic moves and the efficiency of pruning in game-tree exploration.plots.

### *Stock Price Forecasting Using RandomForest, Prophet, and ARIMA*

- Developed and implemented RandomForest, Prophet, and ARIMA models for stock price forecasting, achieving the lowest RMSE with RandomForest.
- Preprocessed data, performed model evaluation using RMSE, and created interactive visualizations with Plotly and Streamlit.

## INTERNSHIP EXPERIENCE

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### *Data Analyst Intern at Tata Power (Summer 2024)*

- Analyzed large datasets to match irradiance levels with generation and module temperature data, and developed an interactive dashboard for monitoring solar PV cell systems.
- Worked on data visualization and anomaly detection, and built a Streamlit-based dashboard for monitoring String Combiner Boxes (SCBs).