

# Apoorv Patidar

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## EDUCATION

### Vellore Institute Of Technology

Madhya Pradesh, India

B.Tech - Computer Science and Engineering - **CGPA: 8.43**

Aug 2022 - Sep 2026

*Specialization:* Artificial Intelligence and Machine Learning

Coursework: Operating System, Computer Networks, DBMS, TOC, Data Structures, Machine Learning, Artificial Intelligence

### DAV Public School

New Delhi, India

Central Board Of Secondary Education - **12<sup>th</sup>** : 80%

2022

Central Board Of Secondary Education - **10<sup>th</sup>** : 87%

2020

## SKILLS

**Languages:** C++, Python, Java, JavaScript, Swift

**Frameworks:** Flask, Streamlit, FastAPI, Keras

**Libraries:** Scikit-Learn, Pandas, Numpy, Rapids, Matplotlib, Plotly

**Tools/Platforms:** Docker, Git, Github, MySQL, MongoDB, PostgreSQL

## PROJECTS

### Digit-Recognition Model

[Github](#)

- Developed a Convolutional Neural Network (CNN) for recognizing handwritten digits from the MNIST dataset, utilizing TensorFlow and Keras, and achieved a classification accuracy exceeding 97%.
- Normalized pixel values to the range [0, 1] and applied noise reduction techniques, boosting model clarity and performance by 10%.
- Implemented data augmentation methods including rotation ( $\pm 20$  degrees), translation ( $\pm 5$  pixels), and scaling ( $\pm 10\%$ ) to expand the training dataset by 150%, enhancing model generalization and reducing overfitting by approximately 15%.
- Optimized hyperparameters such as learning rate and batch size, resulting in a 5% increase in model accuracy and a 20% reduction in training time.

### Bank Churn Prediction Model

[Github](#)

- Created a machine learning model for predicting customer churn, utilizing cross-validation with multiple folds to achieve an Area Under the Curve (AUC) score of 90%, demonstrating high precision and reliability.
- Analyzed and processed a dataset of over 100,000 customer records with 15 features each, applying feature selection techniques to reduce dimensionality by 15% and cut training time by 10%.
- Conducted feature importance analysis to pinpoint key drivers of customer churn, informing targeted retention strategies.
- Enhanced model accuracy by tuning hyperparameters, such as increasing the number of trees in the Random Forest from 50 to 200 and adjusting the Gradient Boosting learning rate from 0.01 to 0.1, resulting in a 12% boost in predictive accuracy.

### Blog Website

[Github](#)

- Engineered a fully functional blog platform using Flask and Python, integrating a relational database to streamline content management and loading efficiency.
- Enabled users to publish, edit, and manage blog posts, delivering a smooth and intuitive user experience with responsive design. Implemented robust user authentication and authorization features to secure blog management functions.
- Enhanced website performance by optimizing SQL queries and implementing caching strategies with Flask-Caching, achieving a 60% reduction in average page load time and significantly improving user experience.

## CERTIFICATIONS/EXTRA-CURRICULAR

- Applied Machine Learning in Python - *Coursera*
- Introduction to Generative AI & LLM - *Google Cloud*
- Supervised Machine Learning: Regression and Classification - *DeepLearning.AI & Stanford University*