

# KARTIK VERMA

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## Education

### B.E in COMPUTER SCIENCE and ENGINEERING

May 2024

Chandigarh University, Mohali (CGPA: 7.75/10)

### CLASS XII (PCM) — CBSE

March 2020

Rk Public School, Deoband (Percentage: 83%)

### CLASS X — CBSE

March 2018

The Doon Valley Public School, Deoband (Percentage: 81%)

## Experience

### Spark Brains Pvt Ltd

July - December 2024

Junior Python Developer

Chandigarh

- Developed robust backend systems using **Django**, **FastAPI**, and **PostgreSQL**, building RESTful APIs with the Django REST Framework.
- Delivered **4 key projects**:
  - \* **Employee Management System**: Integrated a Kanban board for task assignment (like Jira tickets).
  - \* **FNTX**: A trading platform leveraging APIs and OAuth from IBKR Broker for stock market orders and account tracking.
  - \* Applied AI techniques such as transfer learning, **time-series forecasting**, and object detection using **TensorFlow**, **Keras**, and **YOLO**, integrated with production web applications.

## Technical Skills

**Languages**: Python, HTML/CSS, JavaScript

**Frameworks**: Django, LangChain, Hugging Face, Transformers

**Machine Learning/AI Libraries**: TensorFlow, Keras, PyTorch, Scikit-learn, OpenCV, Hugging Face Transformers

**Data Management**: NumPy, Pandas, Pre-processing, VectorDB

**Version Control**: Git

**ML Techniques**: Retrieval-Augmented Generation (RAG), Fine-Tuning, Transformer Architecture, Generative AI

## Projects

### AI-Powered-Knowledge-Base-Assistant | [git](#)

Jan 2025

- Developed an AI-powered knowledge base assistant leveraging **Django**, **OpenAI API** and **FAISS** to provide context-aware responses for user queries.
- Implemented document processing pipeline for PDF, DOCX, and TXT files, including text extraction, chunking, embedding generation, and **FAISS-based** similarity search.
- Enhanced scalability and efficiency through the integration of FAISS for similarity search and the use of OpenAI for dynamic context-based answer generation.
- Built RESTful API endpoints for document upload and query handling, ensuring seamless integration and user interaction.

### Stock Price Prediction Using Yfinance, LSTM, and RNN | [git](#)

Dec 2024

- Implemented stock price prediction models using **Recurrent Neural Networks (RNNs)** and **Long Short-Term Memory (LSTM)** networks to enhance forecasting accuracy.
- Leveraged **Yahoo Finance API (yfinance)** to collect historical stock price data of Apple Inc. (AAPL), including daily open, close, high, low prices, and trading volume.
- Preprocessed data through **scaling**, **normalization**, and **window creation** techniques to ensure model robustness.
- Developed and trained deep learning models using **Keras** and **TensorFlow** to capture temporal dependencies in time-series data.

### CompassionNet | Crowd Funding WebApp [Git](#)

July-Sept 2024

- Developed Backend using **Django framework**, for functionality such as **Role Based authentication** System CURD operations for Features Like creating event, getting donations for event, Volunteer registrations and profile management.
- Design database and Implemented **PostgreSQL**.
- Tech Stack: Django, Html, Css, Javascript, Jquery, Ajax.

## Certifications

- Machine Learning, Coursera. **Stanford University** [Link](#)
- Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning, Coursera. **DeepLearning.ai** [Link](#)