# **Shashwat Singh**

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## TECHNICAL SKILLS

Prompt Engineering, Retrieval-Augmented Generation (RAG), Fine-tuning, Model Context Protocol (MCP), Agent Creation, NLP, CNN, RNN, LSTM, GRU, Bidirectional RNN, Scikit-learn, PyTorch, TensorFlow, LangChain, CrewAI, Hugging Face Transformers, LangGraph, OpenAI, Groq, LLaMA 3, Stable Diffusion, AWS Bedrock, AWS SageMaker, FAISS, Pinecone, ChromaDB, AstraDB, Python (Pandas, NumPy, SciPy, Matplotlib), SQL (MySQL, PostgreSQL), Git, MLflow, DVC, DagsHub, Docker, GitHub

# Professional Experience

Nest India Jan 2025 – Mar 2025

Data Analyst

- Conducted sentiment analysis on fintech reviews, improving insight accuracy by 35% and reducing analysis turnaround by 40%
- Developed interactive dashboards and SQL queries for actionable business intelligence

#### Projects

## AgriGPT - Plant Disease Classification and Agriculture Expert

Feb 2025 - Present

- Built an intelligent crop diagnosis platform combining image classification, weather-aware recommendations, and generative AI
- Trained a CNN model with 92% accuracy for plant disease recognition using TensorFlow/Keras
- Integrated Groq/Gemma2-9b-it and OpenAI GPT-4 for multilingual, natural language-based recovery guidance
- Implemented AstraDB (Cassandra) vector store for context-rich treatment retrieval with CrewAI agents
- Enabled PDF report generation, SMTP-based email alerts, and real-time weather-aware recommendations via WeatherAPI
- Deployed as a full-stack application using Streamlit with optimized performance and user experience

#### StockSage - End-to-End LSTM Stock Prediction Platform

June 2025

2019

80.0%

- Developed a robust ML pipeline and Streamlit dashboard for real-time stock price forecasting using LSTM neural networks
- Integrated Twelve Data API for fetching historical stock data and visualizing ±3% confidence intervals
- Tracked experiments using MLflow and performed hyperparameter tuning with Hyperopt for model optimization
- Used DVC for data versioning and DagsHub for collaborative remote storage and data lineage tracking
- Stored AI predictions and reasoning explanations in AstraDB for long-term tracking and vector-based retrieval

# Extracurricular & Achievements

## Sports and Strategy

- Consistent performer in university-level chess events with strong opening play and strategic endgames
- Active participant in recreational badminton tournaments, promoting fitness and team collaboration

#### Data Science and AI Community

- Active participant in Kaggle competitions, applying machine learning models to real-world datasets
- Contribute to open-source AI projects focused on prediction, classification, and NLP applications

# **EDUCATION**

VIT Bhopal University	Nov 2022 – Present
Bachelor of Technology in Computer Science and Engineering	CGPA: 7.96
YMCA Centenary School & College	2021
Higher Secondary Certificate $(12^{th})$	78.6%

Secondary School Certificate  $(10^{th})$ 

YMCA Centenary School & College