

Akshat Gosain

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 linkedin  github K kaggle

Education

B.E. Computer Science *Birla Institute of Technology and Sciences, Pilani* 2022-2026

- Relevant Coursework: Foundations of **Data Science** (Perfect Score), Brain Inspired **Deep Learning**, Discrete Mathematics, Data Structures and Algorithms (**DSA**), Object Oriented Programming, Probability and Statistics, **Machine Learning**.
- CBSE Board Standard 12th Marks: **96.4%**, Standard 10th Marks: **97%**

Work Experience

Software Intern *Texas Instruments* **Bangalore, India** May 2025 - Present

- Assisting in embedded security software development for Jacinto (TDA4/TDA5) with secure boot and diagnostics.
- Supporting automation and test infrastructure for multi-core embedded systems and regression validation.

Quantitative Researcher (prev. Dev) *GoQuant Technologies* **Remote, United States** Oct 2024 - May 2025

- Researched crypto market microstructure, developed **Avellaneda-Stoikov** models for spread capture and live quoting.
- Balanced latency vs accuracy by integrating signals and inventory-aware skews into **live market-making strategies**.
- Previously built **C++ low-latency** modules for OEMS and **Python analytics** for execution costs in FastAPI dashboards.
- Instructed a quant bootcamp, mentoring interns on integrating algos into production trading infrastructure.

Data Science Intern *DGLiger Consulting Pvt Ltd* **Gurgaon, India** May 2024 - Jul 2024

- Led an **end-to-end stock price prediction** project using **LLMs** (Llama 2, Llama 3, BART) for sentiment analysis of financial news, achieving **66% prediction accuracy**. Implemented news **scrapping**, summarization, and classification, **Flask** for backend.
- Engineered an **LLM-powered AI chatbot** for automating document analysis tasks, reducing manual data review effort by **40%**.

AI Software Developer *Simplia AI* **Remote, United States** Oct 2024 - Oct 2024

- Collaborated directly with the **CEO** and clients to design **custom AI solutions** using **Large Language Models (LLMs)**.
- Developed scalable AI-driven applications leveraging and optimizing proprietary **Python libraries** for real-time data access

Special Projects & Collaborations

Government of India – Intelligence Bureau & Goa Police *AI Radical Content Analyzer* Dec 2024

- Developed and deployed a multilingual AI Radical Video Content Analyzer for detecting **extremist and religious preaching video-content** on platforms such as YouTube, X/Twitter using advanced **NLP, Transformers**, large language models (**LLMs**).
- Awarded **first-place** honors at **Goa Police AI Hackathon** and invited for appreciation by the **Prime Minister** at DG Conference.

Projects

Advanced Hangman Solver - Hybrid Neural Network ML Approach

- Engineered a novel Hangman solver by integrating **GRU** models with **n-gram** statistical analysis, leveraging probability fusion for **context-aware** predictions and achieving **60+%** accuracy, used **regularization** to mitigate overfitting.
- Conducted rigorous experimentation with **Bi-LSTM, CNN, and FNN** architectures, attaining **55%** accuracy initially.

Low-Latency Crypto Trading System - C++/WebSocket Development

- Built a low-latency order execution and management system for **Deribit** using **C++**, and a **WebSocket** server.
- Supporting order placement, cancellation, modification, and orderbook retrieval, real-time orderbook updates.

Research Pre-Print: Built Neural Network with Custom Loss - Deep Learning (Source Code)

- Implemented Neural Network with **2 hidden layers** & categorical cross-entropy, Latex **Pre-Print** Documentation.
- Evaluated and **visualized** accuracy and **F1-scores** for training and testing on datasets: B. Cancer, Iris, MNIST.

Technical Proficiency

- Programming Languages:** C, C++, Java, Python, Verilog, Prolog, Assembly, Embedded C
- Deep Learning Frameworks:** NumPy, Pandas, Pytorch, Neural Networks, LLMs, Keras, TensorFlow, Matplotlib

Awards and Recognitions

Regional Mathematics Olympiad (RMO) — Homi Bhabha Centre for Science Education (HBCSE)

Qualified from Delhi (highest region-wise marks cutoff in India). Only 300 students selected out of 10000+. 98%tile.