Naman Sharma

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B.Sc (Honours) - Data Science and AI
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Education

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Sc (Honours)	Indian Institute of Technology, Guwahati	7.79 (Current)	2023-Present
Senior Secondary	National Examination Board (Nepal)	3.29 / 4	2020
Secondary	National Examination Board (Nepal)	3.55 / 4	2018

Experience

- **Flip Robo Technologies, Bengaluru** *Jan. 2023 - Jul. 2023*
  Data Science Intern *Online*
  – Developed predictive models for "Baseball Case Study", "Loan Application Status Prediction" and "Insurance Claim Fraud Detection" yielding actionable insights.
  – **Executed ML projects**, extracting valuable insights, and enhancing **data-driven decision-making.**
  – Conducted data wrangling and scraping using Selenium and BeautifulSoup to **collect, clean, and preprocess data from various sources**, resulting in a **25 % reduction in data preparation time** for analytical purposes.

Projects

- **Enterprise RAG System** *Jan. 2026 - Mar. 2026*
  Term 8 Project *https://github.com/aiwithns-ai/Enterprise RAG System*
  – Designed and developed an enterprise knowledge assistant using the Retrieval-Augmented Generation (RAG) framework to answer organization-specific queries from internal documents.
  – Built a semantic search pipeline using OpenAI's **text-embedding-3-large** model and **ChromaDB** for vector-based document retrieval.
  – Implemented query **rewriting, semantic retrieval**, and **LLM-based reranking** to improve retrieval relevance and reduce hallucinations.
  – Integrated **GPT-OSS-120B** through LiteLLM for context-aware answer generation grounded in retrieved enterprise knowledge.
  – Evaluated the system on **150 test queries**, achieving **96% keyword coverage, MRR of 0.91**, and **nDCG of 0.90.**
  – Developed an interactive **Gradio** interface enabling real-time question answering and knowledge exploration.

- **LangGraph-Based Autonomous AI Assistant** *Oct. 2025 - Dec. 2025*
  Term 7 Project *https://github.com/aiwithns-ai/LangGraph-Based Autonomous AI Assistant*
  – Developed an autonomous AI assistant capable of executing multi-step user tasks using a **worker–evaluator agent architecture.**
  – Built stateful workflows with **LangGraph**, enabling iterative reasoning, tool usage, task evaluation, and user feedback integration.
  – Integrated external tools including **web search, browser automation (Playwright), Python execution, file management**, and **push notifications.**
  – Implemented an evaluator agent to verify task completion against predefined success criteria, improving reliability and reducing premature responses.
  – Designed and deployed a **Gradio-based interface** for interactive task submission, monitoring, and real-time agent communication.
  – Demonstrated autonomous information retrieval, tool orchestration, browser-based data extraction, and notification delivery workflows.

- **Baseball Case Study** *Apr. 2023 - May. 2023*
  Internship *https://github.com/Sharma1naman/Baseball Case Study*
  – Performed exploratory data analysis on baseball player statistics to uncover patterns and key performance indicators.
  – Visualized important features and checked for outliers to understand data distribution and potential anomalies.
  – Prepared the dataset by cleaning and analyzing player metrics for informed decision-making and model readiness.

- **Loan Application Status Prediction** *May. 2023 - Jun. 2023*
  Internship *https://github.com/Sharma1naman/Loan Application Status Prediction*
  – Explored and visualized loan application data to identify patterns influencing loan approval decisions.
  – Preprocessed the dataset by handling missing values and encoding categorical variables for model readiness.
  – Built a predictive model to classify loan approval status, aiding in faster and fairer decision-making processes.

- **Insurance Claim Fraud Detection** *May. 2023 - Jun. 2023*
  Internship *https://github.com/Sharma1naman/Insurance Claim Fraud Detection*

– Developed a machine learning model to detect fraudulent insurance claims using historical claim data, enhancing the accuracy of fraud detection systems.
– Included data cleaning, feature engineering, and model training with algorithms like Logistic Regression and Random Forest.
– Achieved high prediction accuracy, allowing early identification of suspicious claims and reducing false positives.

- **Medical Cost Personal Insurance Project** *May. 2023 - Jun. 2023*
  Internship *https://github.com/Sharma1naman/Medical Cost Personal Insurance Project*
  – Conducted exploratory data analysis on health insurance data to identify factors influencing medical charges.
  – Visualized relationships between variables such as age, BMI, and smoking status to uncover key insights.
  – Preprocessed data and built a regression model to accurately predict individual medical insurance costs.

- **Red Wine Quality Prediction Project** *May. 2023 - Jun. 2023*
  Internship *https://github.com/Sharma1naman/Red Wine Quality Prediction Project*
  – Performed data preprocessing and exploratory analysis on physicochemical properties of red wine samples.
  – Identified key features affecting wine quality and visualized their relationships using heatmaps and plots.
  – Trained and evaluated classification models to predict wine quality levels based on chemical attributes.

- **Titanic survived Project** *May. 2023 - Jun. 2023*
  Internship *https://github.com/Sharma1naman/Titanic survived Project*
  – Conducted exploratory data analysis on Titanic passenger data to understand survival patterns.
  – Preprocessed data by handling missing values, encoding categorical features, and engineering new variables.
  – Built and evaluated classification models to predict passenger survival using key demographic and travel features.

Technical Skills

- **Programming**: Python, SQL, Java, C, R*
- **AI/ML**: Machine Learning, Retrieval-Augmented Generation (RAG), LLM Engineering, Prompt Engineering, Semantic Search, Vector Search, Data Analysis
- **Frameworks & Libraries**: LangGraph, LangChain, LiteLLM, Scikit-learn, Pandas, NumPy, Matplotlib, Gradio
- **Databases & Tools**: ChromaDB, OpenAI API, Git, GitHub, Power BI, Tableau*, Excel

** Elementary proficiency*

Key courses taken

- **Mathematics**: Introduction to Statistics, Linear Algebra, Optimization, Basic Econometrics, Statistical Inferencing, Time Series Analysis and Forecasting
- **Data Science & Artificial Intelligence**: Introduction to Data Science, AI Basics, Data Mining and Warehousing, Data Analysis Basics, Machine Learning Fundamentals, Recommender Systems, Data Modeling and Visualization, Deep Learning Essentials, Ethics in AI, Artificial Intelligence Techniques in Drug Discovery, Large Language Model Application Engineering
- **Computer Science**: Data Structures, Algorithm Design & Analysis, Relational Database Management Systems, Cloud Computing
- **Signal Processing & Communications**: Signals and Systems, AI-based Wireless Communication Systems
- **Professional & Industry Applications**: Leadership Essentials, Soft Skill Enhancement, Data-Driven Digital Manufacturing

Positions of Responsibility

- **Head Boy**, Gautam Secondary School *2017 - 2018*
  – Acted as a communication bridge between the students and school administration, conveying students' concerns and suggestions.
  – Organized school events, representing the school at various functions, and providing mentorship to younger students, helping them acclimate to the school environment.

- **Prefect**, Gautam Secondary School *2016 - 2017*
  – I was responsible for upholding the school's rules and regulations, ensuring that students follow appropriate conduct, and assisting teachers and school staff in managing classroom and campus behavior.
  – I also assisted in organizing and overseeing school events and activities.

Achievements

- **Science Exhibition**, 2nd Position, Gautam Secondary School *1st January, 2016*