Sumit Kumar Barnwal

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Skills

- **Languages**: C++, Python, Java, SQL
- **Frameworks**: NumPy, Pandas, Matplotlib, Seaborn, scikit-learn
- **Tools/Platforms**: MySQL, Git, GitHub, Power BI, MS Office, Maven, Linux, Azure Fundamentals
- **Soft Skills**: Problem-Solving, Team Player, Adaptability, Creative

Experience

- **AI Intern – Infosys Springboard** Feb '26 – Present
  - Optimized sales strategies for small businesses by analyzing multi-dimensional datasets using SQL and Pandas, identifying 3+ key profitability drivers and performance gaps.
  - Engineered a robust data pipeline including cleaning, preprocessing, and Exploratory Data Analysis (EDA) using NumPy, reducing data noise and improving downstream model reliability.
  - Designed interactive data visualizations and comprehensive profit analysis reports using Matplotlib and Seaborn, translating complex data into actionable insights for stakeholders.
  - Implemented predictive forecasting models using machine learning algorithms to project sales trends, improving business forecasting accuracy for upcoming quarters.

    Tech Stack Used: Python, Pandas, NumPy, SQL, Matplotlib, Seaborn, Machine Learning

Projects

- **AI-Powered Exam Proctoring Platform** | GitHub Aug '25 – Sep '25
  - Architected a Computer Vision pipeline using OpenCV for real-time anomaly detection and behavioral feature extraction.
  - Developed a Probabilistic Risk-Scoring Engine that aggregated multiple signals (head/eye movement) to detect fraud while minimizing false positives.
  - Engineered a live monitoring dashboard using HTML/CSS to visualize real-time risk indicators and automated proctor alerts and validated model performance through rigorous cross-validation, ensuring high reliability across diverse environments.

    Tech Stack Used: Python, OpenCV, NumPy, Pandas, SQL, Machine Learning, HTML, CSS

- **Wine Quality Prediction** | GitHub Oct '25 – Dec'25
  - Built an end-to-end ML pipeline to predict wine quality, utilizing Scikit-learn for feature scaling, preprocessing, and Exploratory Data Analysis (EDA).
  - Benchmarked Regression and Classification models, achieving an R2 Score of 0.81 and 78% accuracy using a hyperparameter-tuned Random Forest algorithm.
  - Deployed an interactive Streamlit app to visualize real-time predictions, feature importance, and model evaluation metrics.
  - Optimized model precision by implementing cross-validation and handling class imbalances in physicochemical attributes.

    Tech Stack Used: Python, Pandas, NumPy, scikit-learn, Matplotlib, Seaborn, Streamlit

Certificates

- Cloud Computing [NPTEL] | Link Oct '25
- ChatGPT-4 Prompt Engineering: ChatGPT Generative AI & LLM [Infosys] | Link Aug '25

Achievements

- **Innovate X Hackathon – Top 10 Finalist**
  Reached the final round in the Innovate X Hackathon out of 120 teams.
- **Data Structures & Algorithms**
  Solved 300+ algorithmic problems on LeetCode and GeeksforGeeks covering arrays, strings, linked lists, stacks, queues, trees, graphs, dynamic programming and strong grasp of time–space complexity.
- **Competitive Programming:** Global Rank 252 in LeetCode Weekly Contest 468 (34k+ participants).

Education

- **Lovely Professional University** Phagwara, Punjab
  Bachelor of Technology - Computer Science and Engineering; ***CGPA: 8.25*** *Aug '23 – Present*
- ***Manisha International School*** *Durgapur, West Bengal*
  Intermediate; ***Percentage: 80*** *Apr '22 - Mar '23*
- ***Satyanarayan Academy*** *Durgapur, West Bengal*
  Matriculation; ***Percentage: 83*** *Apr '20 - Mar '21*