

## PRINCE KUMAR

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### WORK EXPERIENCE

#### Brainwave Matrix Solutions intern - Data Scientist

07/24-09/24

- **Twitter Sentiment Analysis:** [Link](#)
  - Built an NLP-based sentiment analysis model to classify tweets as positive or negative.
  - Implemented Logistic Regression, SVM, and Bernoulli Naive Bayes models, achieving the highest F1 score and accuracy with Logistic Regression.
- **Sale Data Analysis of Commercial Store:** [Link](#)
  - Increased revenue by 15% and improved decision-making speed by 30% through **Python-based sales trend analysis**, **VLOOKUP-enabled Excel dashboards**, and **Power BI visualizations** across 4 store locations, tracking **10+ KPIs and 12 months of sales data**
  - Optimized staffing and promotions, improving workforce efficiency by 20% and reducing stockouts by 15%, using insights from **SQL queries** on 10,000+ transactions to identify peak sales hours and top-selling products.

#### physics wallah

##### intern - Data Scientist

08/2023 – present

- **Allergy Prediction System:** [Link](#)  
**Tools & Technologies:** Django, Python, Random Forest, Machine Learning, Data Preprocessing
  - Developed an end-to-end **Allergy Prediction System** using the **Django framework** and **Machine Learning** to predict allergic reactions.
  - Achieved **81% accuracy**, with improved model performance metrics such as **79% recall**, **82% precision**, and **80% F1 score**.
  - Designed and deployed the system to assist **doctors** in **reducing assessment time** and helping **patients** manage allergies proactively.
  - **Integrated a machine learning** model to provide **real-time predictions** based on user input, enhancing **healthcare decision-making**.
- **Electrolyte Imbalance Prediction System:** [Link](#)
  - Developed a predictive model achieving 80 % accuracy in identifying electrolyte imbalances based on serum test results.
  - Implemented a **Random Forest Classifier** with 100 estimators, significantly improving **prediction reliability**.
  - Scaled features using **StandardScaler**, **enhancing model performance and accuracy**.
  - Helped doctors and patients effectively analyze test results, facilitating timely medical decisions and improved patient outcomes.
  - **Automated** the prediction process for test labs, **reducing the time** needed for doctors to assess patient data by **5 minutes per patient**.
- **Analytics for Supply Chain:**
  - Reduced employee effort for each Buyer by **20 days**.
  - Gathered **business requirements** and effectively analyzed business needs to translate them into deliverables.
  - Designed complex **data models** identifying **cardinality** and **join** conditions between 20 tables from SAP each containing 50 lakhs of records.
  - Designed **data visualization** charts for multiple KPIs like **impact** of change in **prices of raw material** on the final product, **Share of Business (SOB)** of suppliers and its impact in **Power Bi** for the parts used in Bikes at **6 manufacturing Plants** across India.
  - Led a team of 3 developers for building 12 Power Bi dashboards that enabled users to easily interpret complex datasets and **identify trends** quickly, resulting in improved decision-making and **reduced cost by 30%**.
  - **Collaborated cross-functionally** with diverse teams in **cleaning the data** and building **root cause analysis** solutions for 500+ business queries within a restricted time frame, **increasing the user engagement by 40%**.

#### Taazaa.inc, Noida

##### Associate Software Developer (Full Stack Developer)

04/2022 – 07/23

- Curated and extracted data from diverse websites using **web scraping** tools. Conducted thorough **data cleaning** processes to ensure **accuracy** and **relevance**, analyzing and extracting insights.
- Developed interactive **graph dashboard** and **user interface** using the **Appsmith**, **MySQL**, and **JavaScript** to **reduced time by 3 months**.
- **Query Optimization and Performance Enhancement** to Designed and **optimized SQL queries** to enhance **data retrieval** efficiency, significantly reducing page load times and improving overall application **performance by 30%**.

### EDUCATION

- **B.Tech. Computer Science and Engineering (Ai & MI)**, Sharda University, Greater Noida 07/2018 – 06/2022
- **Class 12**, Pannu Lal Singh college, Patna 2017
- **Class 10**, S.D.V. Public School, Patna 2015

### KEY SKILLS

**Machine Learning:** Supervised Learning, Classification, Regression, Linear Regression, Logistic Regression, Decision Tree, SVM, KNN, Ensemble techniques, Gradient Boosting, XGBoost, Random Forest, Unsupervised Learning, Dimensionality Reduction, Clustering, Principal Component Analysis, K-Means, One-hot encoding, Exploratory Data Analysis;

**Deep Learning:** ANN, Convolutional Neural Network, RNN, Natural Language Processing NLP, LSTM, Transformer, BERT, GPT, LLM, Langchain, Llama, Palm Transfer Learning, Tensorflow,

**Tools:** Anaconda, Jupyter Notebook, Django, Spyder, Python, StreamLit, Open AI, Hugging Face;

**Libraries:** scikit-learn, numpy, pandas, plotly, matplotlib;

**Data Analytics:** Structured Query Language (SQL), Data Modeling, Data Visualization, Power Bi, Tableau, SSMS, MS Office: Excel, PowerPoint, Business Intelligence;

**Cloud:** Microsoft Azure, Snowflake, Azure Data Factory;

**Others:** Artificial Intelligence, Mathematics, Statistical Modeling, Data Structures and Algorithms, Database Management System, Object Oriented Programming, Problem solving, Stakeholder Management

### RESEARCH PAPER PUBLICATIONS

- **REAL-TIME MULTIPLE OBJECT DETECTION AND TRACKING:** A Hybrid Model Unifying Computer Vision, Deep Learning and Machine Learning -ijsrem Journals [Link](#)

### COURSES/ ACHIEVEMENT

- Microsoft Power Bi Data Analyst Course
- SQL programmer on Hackerrank
- Full stack Data Science Pro Course, physics wallah

### EXTRA CURRICULAR ACTIVITIES

- Core member, Team Management, Promotion Team and Photography Society: Led a team of 20 students and organized various workshops for Fest cultural program
- Volunteered at a blood donation camp organized by Sharda Society to promote blood donation for people in need.