

Barath Kumar R

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PROFESSIONAL SUMMARY

Data Science professional with practical experience in Machine Learning, Data Analytics, and Business Intelligence tools, seeking an entry-level role within a growth-oriented organization. Proficient in Python, SQL, Power BI, Tableau, and Excel, with experience in data cleaning, feature engineering, and data visualization. Familiar with supervised and unsupervised learning techniques, statistical methods, and model evaluation metrics. Demonstrated excellence in communication, leadership, and problem-solving through successful collaboration with cross-functional teams to achieve shared objectives.

TECHNICAL SKILLS

- Proficient in Machine Learning, Data Analysis, and Statistical Modeling with hands-on experience in supervised and unsupervised learning techniques.
- Implemented algorithms such as Logistic Regression, Naive Bayes, SVM, Random Forest, and Clustering for predictive analytics and segmentation.
- Applied dimensionality reduction techniques including PCA to improve model performance and efficiency.
- Strong foundation in Statistics: Hypothesis Testing, Normal Distribution, Z-test, T-test, and probability concepts.
- Skilled in data preprocessing: data cleaning, feature engineering, handling missing values, normalization, and correlation analysis using Python (Pandas, NumPy, Scikit-learn, PyTorch)
- Experienced in SQL for data manipulation and querying structured datasets.
- Built data visualization dashboards using Power BI to present insights effectively.
- Knowledge of model evaluation metrics: Accuracy, Precision, Recall, F1-score, ROC-AUC.
- Proficient in NLP techniques, text mining, and foundational Deep Learning concepts including Artificial Neural Networks (ANN), Convolutional Neural Networks (CNN), Feedforward Networks, Backpropagation, Activation Functions, Gradient Descent.

ACADEMIC PROFILE

- B.Sc. Visual Communication from Dwaraka Doss Goverdhan Doss Vaishnav College, Chennai in *2021*. - (GPA: 6.897)
- XII: Kaligi Ranganathan Montford Matriculation Higher Secondary School, Chennai in *2018* – 56.6%
- X: Kaligi Ranganathan Montford Matriculation Higher Secondary School, Chennai in *2016* – 79.8%

PROFESSIONAL CERTIFICATIONS

- **Imarticus Learning:** Postgraduate Program in Data Science and Analytics with Advanced ML Track.
- **Google:** Introduction to Generative AI
- **CSC:** Diploma in Microsoft Office
- **SSI Computer Certificate:** Graphic design
- **Dakshina Bharat Hindi Prachar Sabha:** Pratham

PROJECTS

1. **Social Media Campaign Performance & ROI Analysis**

The primary objective of the project is to analyze campaign data to identify high-performing channels and optimize marketing strategies based on key performance indicators (ROI, ROAS, CTR, CPC).

Description

- Data sourced from Kaggle, analyzing campaign variables to understand marketing performance and business impact.
- Processed and analyzed 200K+ campaign records using Python (Pandas) for data cleaning, transformation, and insight generation.
- Performed EDA, feature engineering, and KPI creation including ROI, ROAS, CTR, and CPC.
- Developed interactive dashboards in Power BI to visualize revenue, profit, and campaign effectiveness.
- Identified high-performing channels and audience segments, improving ROI (~5%) and achieving ~6x ROAS.
- Delivered actionable insights on campaign trends, cost efficiency, and budget optimization for better decision-making.

[Project File](#)

2. MediAlt: AI-Powered Medical Prescription Reader

The main objective of the project is to extract and structure information from handwritten medical prescriptions using AI and OCR techniques for improved readability and usability.

Description

- Developed MediAlt, an AI-based system to read handwritten medical prescriptions and present the extracted details in a clear, structured format.
- Used Donut OCR to extract text from prescription images and Gemini to verify, correct, and organize the output into structured JSON.
- Built a Streamlit web application for easy image upload, prescription display, medicine cards, and interactive chat support.
- Added features to extract patient details, doctor details, clinic name, date, and medicines, making prescriptions easier to understand.
- Integrated region-aware brand lookup to suggest alternative medicine brands across India, USA, UK, and Global regions.
- Fine-tuned the Donut model on 1,000 prescription images and hosted the trained model on HuggingFace for easy deployment.
- Designed the system with modular architecture, lazy loading, and environment-based configuration for better performance and maintainability.
- Improved prescription understanding by combining OCR, AI verification, structured extraction, and user-friendly visualization in one solution.

[Project File](#)

PROFESSIONAL EXPERIENCE

ORM Officer | Star Health and Allied Insurance Co. Ltd

Jan 2023 – Apr 2025 | Chennai, India

- Leveraged social listening and text analytics tools to process customer feedback data, performing sentiment analysis to identify key engagement trends.
- Transformed unstructured customer interactions into actionable insights, enabling data-driven decision-making and delivering measurable improvements in efficiency and decision accuracy by 20-25%.
- Monitored key performance indicators (KPIs) such as response time, sentiment score, and engagement metrics.
- Identified potential reputation risks through data analysis and implemented proactive mitigation strategies, resulting in a 10-20% reduction in incidents or adverse events.

- Managed and resolved customer queries efficiently, improving overall customer experience and satisfaction.
- Engineered automated reports and data visualization dashboards in Excel and Power BI to communicate metrics across teams.

PERSONAL SKILLS

- Demonstrate a strong power of analytical reasoning and critical thinking to evaluate complex situations.
- Meticulous attention to detail – Ensures accuracy, quality, and thoroughness in all deliverables and projects.
- Strong problem-solving skills – Identifies core challenges and implements effective, creative solutions.
- Highly adaptable. Able to pivot quickly and work well under changing environments or shifting organizational priorities.
- Exhibited strong data storytelling skills by translating complex datasets into clear, compelling narratives for stakeholders.
- Demonstrate exceptional organization and time management skills by successfully prioritizing tasks and meeting tight deadlines.
- Decisive and forward-thinking – Gathers relevant insights to make well-informed, high-impact decisions under pressure.

PERSONAL INFORMATION

- Languages : English, Tamil, Hindi
- Address : Chennai, India.