

# AMAL PRASAD

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## EDUCATION

**Medicaps University** | Indore, India  
Bachelor of Technology (Computer Science)

August 2017 – May 2021

## SKILLS SUMMARY

- **Languages:** Python, JAVA
- **Frameworks:** Pandas, Numpy, Scikit-Learn, Matplotlib, TensorFlow, PyTorch, GANs, Transformers
- **Tools:** MySQL
- **Cloud Platforms:** AWS
- **Deployment Tools:** CI/CD Pipelines, Trivy
- **Platforms:** VSCode, Jupyter Notebook

## WORK EXPERIENCE

**Co- Founder**  
AGP Enterprises

September 2023 – Present

- Co-founded and managed a Printing and Stationery services company, directing daily operations, setting competitive pricing strategies, and handling communications with over 50 recurring clients.
- Designed and produced 500+ print materials—including visiting cards and business forms—using CorelDraw, improving turnaround time by 30%.
- Registered and secured 30+ government tenders through the GeM (Government e-Marketplace) portal, generating a 25% increase in annual revenue.
- Gained comprehensive knowledge of industry pricing, supply chains, and vendor management, reducing procurement costs by 15% through strategic negotiations, imbuing strong verbal skills.

**Project Engineer (DevOps)**  
Capgemini, Pune

August 2021 – September 2023

- Architected deployments on Google Cloud Platform (GCP) by configuring and optimizing cloud resources for scalability and reliability by 20%.
- Engineered 15+ containerized applications using AWS, Kubernetes, Docker, and Google Container Registry (GCR) reducing deployment time by 15%.
- Streamlined CI/CD pipelines by integrating Git, JIRA, and Confluence; conducted 100+ Trivy scans to fortify container security.
- Partnered with senior engineers to diagnose, resolve, and analyze incidents through comprehensive log and metric analysis, cutting mean time to resolution by 20%.

## PROJECTS

**RBI Chatbot** | [LINK](#)

August 2025 – September 2025

- Built RAG-based chatbot processing 108 document chunks from RBI guidelines using Python, LangChain and ChromaDB.
- Streamlined semantic search pipeline with 1000-character chunking across 16,198 words of regulatory content.
- Integrated OpenAI GPT-3.5-turbo and Ollama models with automated citation tracking for compliance queries.
- Deployed conversational AI with MMR retrieval (k=5) delivering context-aware responses with source attribution.

**Supermarket Basket Analysis** | [LINK](#)

July 2025 – August 2025

- Analyzed 1 million customer transactions using unsupervised machine learning with K-Means clustering to segment 101,335 customers into 3 actionable business groups, achieving 99.1% model stability.
- Built a customer segmentation model leveraging feature engineering and clustering evaluation metrics, attaining a 79.5/100 composite score and deriving insights on a 59% reorder rate, projecting a 12–20% revenue uplift.
- Performed advanced feature extraction to generate 18 behavioral features and deployed a production-ready clustering pipeline with a 0.381 silhouette score for model validation and performance monitoring.

- Devised a trading engine to make data-driven buy, sell, or hold decisions for higher return on investment.
- Trained and compared SimpleRNN, LSTM, and GRU models on the AAPL dataset; engineered 105 derived features and applied PCA to cut feature dimensions by 90%.
- Integrated news sentiment analysis using APIs from established news providers and visualized training metrics while saving deployment-ready .pkl files with ModelCheckpoint.

**Energy Consumption Reduction | [LINK](#)****January 2025 – February 2025**

- Developed machine learning models (XGBoost, Linear Regression etc.) to predict household energy consumption in France using historical data and achieved R<sup>2</sup> scores of 0.85 and 0.88 for daily and weekly energy usage predictions.
- Implemented load balancing to reduce peak demand by 22.86% and cut energy costs by 10.95%.
- Delivered €277 annual savings per household and lowered CO<sub>2</sub> emissions by 31.07 kg.

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**CERTIFICATES****GUVI-HCL | IIT-M | NSDC | [CERTIFICATE](#)****December 2024 – March 2025**

- Built a strong foundation in data analysis, statistics, and machine learning concepts including supervised and unsupervised algorithms.
- Gained hands-on experience with Python, pandas, NumPy, scikit-learn, and data visualization libraries to clean, process, and model real-world datasets.
- Developed end-to-end data science projects covering data preprocessing, feature engineering, model building, evaluation, and business insight generation.

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**ACHIEVEMENTS****NTSE**

- Secured State Rank 8 and scored 87 out of 90 to secure State Rank 2 for MAT paper.

**Manikarnika Photography Exhibition, Jhansi**

- Secured 2 consecutive Silver Medals in photography exhibition organized by Manikarnika Art Gallery, Jhansi.