NAGRAJ DESHMUKH

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PROFILE

- **Technical Skills** : Python, R, SQL, Numpy, Pandas, REST APIs, Linux scripting, Deep learning
- **Development Tools** : AWS, Tableau, Git, MS Excel, MongoDB, Jupyter, Tensorflow, PyTorch, Docker
- **Certifications** : AWS Certified Cloud Practitioner, Microsoft Azure Fundamentals AZ900

EDUCATION

Purdue University, Daniels School of Business　　　　　　　　　　　　　　**West Lafayette, IN**
Master of Science in Business Analytics and Information Management　　　　　　　　　**July 2024**

- Coursework : Machine Learning, Data Mining, Computing for Analytics, Applied AI in Business

Malaviya National Institute of Technology (NIT) Jaipur　　　　　　　　　　　**Jaipur, India**
Bachelor of Technology, Electrical Engineering　　　　　　　　　　　　　　　　　**May 2020**

PROFESSIONAL EXPERIENCE

Prediction Guard (LLM Compliance)　　　　　　　　　　　　　　　　**West Lafayette, IN**
AI Engineer Intern　　　　　　　　　　　　　　　　　　　　**January 2024 – March 2024**

- Engineered an autonomous LLM powered marketing agent to identify relevant trends and generate post ideas specific to target platforms in real time, boosting post frequency by **40%** and engagement by **25%**
- Developed a prompt-chaining and **RAG** pipeline to enhance the agent's context awareness and scalability across industries, achieving significant brand alignment with a semantic score of **0.8**
- Implemented rigorous content verification for factuality, toxicity, and PII, ensuring compliance and content safety
- **Won** Analytics Poster Presentation competition at Purdue University for outstanding project impact and innovation

Spry Therapeutics (Musculoskeletal Healthcare)　　　　　　　　　　　　　**Bengaluru, India**
Data Scientist　　　　　　　　　　　　　　　　　　　　　**August 2020 - October 2021**

- Directed a four member data science team to engineer a **computer vision** pipeline for company's flagship Remote therapeutic monitoring (RTM) tool securing a **$7M** funding from marquee investors
- Proposed and led movement categorization project helping product scale from **5** exercises to **400**+ exercises
- Optimised pose detection models in client-side AI, improving speed by **200%** and accuracy by **65%**
- Designed novel algorithms for calculating **15**+ accuracy parameters of five categories of exercises
- Introduced visualizations with **mediapipe**, **opencv** and **pillow**, increasing customer satisfaction by **23%**

Societe Generale (Multinational Risk Management)　　　　　　　　　　　　**Bengaluru, India**
Software Engineer　　　　　　　　　　　　　　　　　　　**August 2020 - October 2021**

- Engaged in agile team to continually deliver a robust Credit Risk Monitoring application used by **1100**+ end-clients
- Solved **6** types of severe security vulnerabilities, making application OWASP compliant, and represented Risk team in companywide disaster recovery activity including stakeholders from France, India and Romania
- Formulated a documentation pipeline for common issues, resulting in a **30%** reduction in team's response time
- Implemented a mechanism for live debugging directly in production for **10%** of users

Robotics And Machine Analytics (RAMAN)　　　　　　　　　　　　　　　**Jaipur, India**
Researcher　　　　　　　　　　　　　　　　　　　　　　　**July 2019 - May 2020**

- Developed novel metaheuristic optimization algorithms and published two research papers with total **20** citations in reputed journals - Evolutionary Intelligence (Springer) and Knowledge Based Systems (Elsevier)

PROJECTS

Walmart M5 Sales Forecasting | Keras, LSTM, XGBoost, ARIMA, Feature Engineering　　　　**February 2024**
- Forecasted 30K+ time series using engineered sales, pricing, temporal and aggregation features.
- Built LSTM models achieving validation loss of 0.013 and WRMSSE of 1.41

Boosting AirBnb Host Profits | K-Means, Regression Analysis, XGBoost, Hypothesis testing　　**December 2023**
- Dissected AirBnb's Superhost data for Chicago, to identify demand seasonality and market expansion strategy.
- Built predictive models to empower hosts to qualify as superhosts, and optimize listings and earnings

LLMs for automated medical documentation | Prompt Engineering, Python, Sagemaker　　**November 2023**
- Hosted Llama-2 on AWS Sagemaker and implemented zero-shot prompting and RAG for information extraction from medical transcripts in multiple languages and achieved WER of 0.86

GAP Inc's Big Data Strategy | Web-scraping, Selenium, Google Maps API, Azure Text API　　**October 2023**
- Analysed store locations, conducted sentiment analysis on reviews, and SEP analysis on keywords.
- Integrated financial insights from EDGAR filings for comprehensive marketing and brand strategy evaluation