



NETRA KULKARNI

Data Scientist | Business Scientist | Natural Language Processing | Deep Learning | AI-ML | Project Manager | Business Analyst - Retail | Consulting | MS in Data Science

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STRENGTHS

ML - DL - NLP

Built a Top 'n' similarity search algorithm employing natural language processing (NLP) and ANN (Approximate nearest neighbor) for live data

Innovated Learning based Ontology matching - harnessing the power of Large Language Models to elevate ontology matching, enabling precise semantic alignment and knowledge integration.

Project Management

Led a team of 4 through an end-to-end project that enabled a brand new time-series based forecasting functionality for a leading retail chain

Design Thinking

Initiated efficiency optimisation discussions with top management; Identified gaps, proposed and built tools that streamlined processes leading onto an improved customer service plus saved over 40 man-hours per week across all project teams in the company.

Effective Leadership

Initiated and brought together other project managers to build a common knowledge repository for the event-support processes that improved the service quality while reduced the training time by almost 50%.

Empathy

Have been a part of several multi-cultural, multi-national and multi-nationality teams across multiple continents, and thus had the privilege to experience diversity that help empathize and understand colleagues and clients better.

Multi-Lingual

English (Advanced)
Hindi (Native) | Marathi (Native)
Thai (Elementary)
Portuguese (Elementary)
Polish (Introductory)

SUMMARY

With over a decade of industry experience, I am a seasoned professional skilled in data science and project management. My journey has been enriched with immersive experiences in data science, particularly focusing on NLP, Deep Learning, and Business Analysis. Beyond formal education, I have successfully applied this expertise to drive innovation and deliver impactful insights through a variety of projects.

As a proficient leader in projects, I specialize in leveraging ML and AI techniques, boasting a proven track record in implementing LLMs, recommendation algorithms, and time-series based demand forecasting. With 13+ years of multifaceted experience, I bring a wealth of expertise and am adept at addressing complex challenges.

Driven by a passion for technology and its potential to address real-world problems, I excel in delivering tangible outcomes and supporting organizations in achieving their data science goals. Currently seeking a Data Scientist role where I can continue to utilize my diverse skill set to drive innovation and contribute to meaningful projects.

PROJECTS

ML Based Ontology Matching

03/2022 - 10/2023

Lisbon Semantic Data Lab

As a data scientist, I researched how Large Language Models (LLMs) like S-BERT can revolutionize ontology matching, addressing challenges in semantic understanding and context.

- **Challenge:** Increased ontology matching accuracy with a novel approach.
- **Tasks:** Developed innovative techniques for fine-tuning Large Language Models on ontology datasets.
- **Result:** Enhanced ontology alignment accuracy by leveraging contextual information and LLM capabilities.
- **Added Value:** Facilitated more accurate data interoperability and knowledge sharing within complex domains.

Top 'n' Similarity Recommendation

10/2022 - 02/2023

Confidential Company

As a Data Scientist, I analysed large database, researched, feature engineered and modelled an algorithm that achieved the target KPIs

- **Challenge:** To develop a similarity search algorithm that lists top n matches for any given record from a large scale relational database (800K+ records)
- **Tasks:** data collection, cleaning, EDA, text processing, feature engineering, indexing with ANNOY
- **Result:** a production-ready algorithm with acceptable results and target performance values
- **Added Value:** multi-language support + scalable processing

Hand Gesture recognition

05/2022 - 06/2022

Learning Based Multimedia Processing Course Project

As a Data Scientist, I modelled an algorithm that can identify hand gestures through an ordinary camera

- **Challenge:** To identify and classify 15 hand gestures read through an ordinary camera (sensor)
- **Tasks:** Researched a dataset with 14 gestures, added one of our own gesture Using Google's open-source framework *Mediapipe* to transform the 3D skeleton image, employed transfer learning on a pre-trained multi-channel deep convolution neural network (MC-DCNN)
- **Result:** a model that could identify and classify hand gestures
- **Added Value:** ease to add new gestures, faster training with transfer learning

EDUCATION

MS in Data Science & Engg

Instituto Superior Tecnico -
Universidade de Lisboa

08/2021 - 10/2023 Lisbon, Portugal

B.E.(Hons.) Computer Science

Rajiv Gandhi Technical
University

07/2004 - 06/2008 Indore, India

SKILLS

Machine Learning · Deep Learning LLMs ·

Data Visualization · dataflow ·

decision trees · IoT · CI/CD ·

Multivariate Analysis · Computer Vision ·

Neural Networks · Artificial Intelligence ·

hypothesis testing A/B Testing ·

Decision Support Models · EDA ·

Amazon Web services AWS · docker ·

Relational Databases · Design Thinking ·

Generative AI · Statistics for ML ·

Agile methodologies · Mathematics ·

statistical modeling · unit testing ·

time series forecasting · Google Cloud ·

Data manipulation

Programming

Python 3 · SQL database · R · C/C++ ·

Unix · Shell Scripting · Oracle PL/SQL ·

D3 · RDBMS · Data Structures · Git ·

PyTorch · NumPy · Pandas · Scikit-Learn ·

Tensorflow · Matplotlib · Seaborn ·

jupyter notebooks · linux · keras

MY PASSIONS

 Recreational Blogging

 Travelling

 Leading a Cultural
Community through
events and social
gatherings

 Public Speaking

PROJECTS

Binary Classification for multi-variate data

12/2021 - 02/2022

Multivariate Analysis Course Project

As a Data Scientist, I modelled a Binary classification based on the customer details.

- **Challenge:** To predict if the client would subscribe to a bank term deposit based on multiple variables (20+)
- **Tasks:** EDA, dimensionality reduction using PCA, supervised learning and accuracy comparisons between multiple models; clustering to identify customer clusters in the data
- **Result:** comparisons for multiple different model performances (accuracy %)
- **Added Value:** visible clusters in the customer data

Oracle Retail Demand Forecasting

02/2017 - 05/2018

Siam Makro PCL Thailand, (Cash and Carry)

As a Project Manager, led the implementation of time-series based retail demand forecasting - part of the planning stack

- **Challenge:** Sprints of Technical implementation and subsequent analysis and tweaks for accurate predictions; Introduced sophisticated demand forecasting to the business team
- **Tasks:** Import historical sales data, clean and label it, analyse the predictions and tweak parameters to forecast better, add seasonality and causal info
- **Result:** Demand forecasts for normal, seasonal and causal sales
- **Added Value:** Auto-replenishment for 'convenience' goods (about 10%)

PROFESSIONAL EXPERIENCE

Project Manager

11/2020 - 08/2021

MULTILEARNING Group

Lisbon, PORTUGAL

Project Management | Project Co-ordination | Business Analysis | Process Streamlining | Virtual Events and E-learning | Consulting

Business Analyst (Manager)

10/2013 - 05/2018

Siam Makro Public Company Ltd

Bangkok, THAILAND

Retail AI | Retail Analytics | Time-Series Demand Forecasting | Project Management | Business Analysis | Change management | Vendor Evaluation & Selection | Reporting to Key Stakeholders | White papers | End - User Training

Oracle Apps Developer

04/2013 - 09/2013

Food and Agriculture Organization of the United Nations

Bangkok, THAILAND

Software Development | Global Support | Social Initiatives

Technical Consultant

02/2012 - 03/2013

OLR

Bangkok, THAILAND

Technical Consulting | Application Development | Application Support | Training

Software Developer

03/2011 - 12/2011

NIIT Technologies

Bangkok, THAILAND

Technical Consulting | Application Development & Support | Training

Software Engineer

10/2008 - 10/2010

KPIT

Pune, INDIA

Trainee | Offshore Development | Global Support | System Integration

TRAINING / COURSES

Generative AI Fundamentals

Google | Feb 2024 | Credential ID: 8036273

Responsible AI

Google | Feb 2024 | Credential ID: 8043608