

NISHEETH JAISWAL

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TECHNICAL SKILLS

Languages: Python, SQL, Java, HTML, PowerShell.

Analytics Tools: Exploratory Data Analysis (EDA), Pandas, NumPy, SciPy, Seaborn, Plotly, Matplotlib, Jupyter, Colab, NotebookLM, StreamLit, Looker, Tableau, Power-BI.

Machine Learning: Supervised, Unsupervised, Semi-Supervised, Ensemble Learning, Boosting, ML pre-processing pipeline, Scikit-learn, PySpark.

Deep Learning and AI: PyTorch, Keras, TensorFlow, JAX, OpenCV, nltk, spaCy, NER, sentiment analysis, cosine-similarity, Recommendation systems, Forecasting and time-series analysis, Optimization, NLP, DNN, CNN, RNN/ LSTM, Transfer Learning, Few-shot Learning, GANs, Auto Encoders(AE), Variable-AE, Diffusion models, Transformers, Vision Transformers, Reinforcement Learning, Multi-Agent System, GenerativeAI

Language Models: Large Language Models (LLMs), Finetuning LLMs, Retrieval Augmented Generation (RAG), OpenAPI, LangChain, ChainLit, Hugging Face, HF Datasets, HF Spaces, Github Spaces, Open Source LLMs, Multi-Lingual and Vision LLMs, Ollama MLOps, On-prem LLMs.

Databases: Relational Databases - SQL Server, PostgreSQL, MySQL, DuckDB. No-SQL Databases - Redis, MongoDB. Cloud Databases - Redshift, S3, Blob Storage, Snowflake. Vector Database - LanceDB, Chroma.

ETL Tools: Matillion ETL, KNIME, Azure Data Factory, Dataprep, Dataflow, Dbt.

Dev Tools: Anaconda, VS Code, VisualStudio, Jupyter Notebooks, Git, Github, Github Actions, Docker, Kubernetes, MLFlow, Flask, FastAPI, Heroku, Onnx.

Areas of Interest: Cloud computing - AWS, Azure, GCP, Dev-Ops, Data-Ops, MLOps, LLMops, System design, Architecting secure data applications, AI-Agents, Building proof of concept(POC) projects.

EXPERIENCE

Analytics and Reporting Manager - Data Informatics, AI/ML

Jun 2023 - Present

Hertfordshire Community NHS Trust, Welwyn Garden City

Remote, FT

- Analytics and Information governance, Digital Transformation, Change Management, Transition from on-prem data sources.
- Predictive Modeling using Machine Learning, Forecasting long waiting time in NHS, Automating processes and reporting.
- Collaborating with cross-functional teams and services in the NHS to ensure reporting and data submissions are met, along with benchmarking on past data.
- Working on reducing long waiting times for patients for Community health services, weekly/biweekly/monthly Situational reporting for Virtual Wards / Hospital at Home, Urgent Care Response, Community Hospitals, and Inpatients.
- Providing actionable insights using Power-BI and StreamLit for reporting automation with Analytics engineering.
- Implementing performance enhancement processes, efficiency in heavy database on-prem uploads using DuckDB, and Faster Data Flow on the Federated data platform for NHS England.

Sr. Information Analyst

May 2022 - Jun 2023

Hertfordshire Community NHS Trust, Welwyn Garden City

Remote, Contract

- Worked with cross-functional teams for all data requirements within the trust and for National level data provisioning, collection, and submissions.

Artificial Intelligence and Deep Learning Mentor

Oct 2021 - May 2022

DeepLearning.ai, Coursera

Remote

- Mentoring on AI specializations on AI for Medicine on using AI for Diagnosis, Prognosis, and Treatment, and Natural Language Processing specialization, which included LSTMs, Transformers, etc.

Data Engineer and DataOps

Sep 2021 - Dec 2021

Nordcloud an IBM Company, Birmingham

Remote, Contract

- Working with Continental Tyres headquarters in Germany on cloud data migration, managing data pipelines to analyse global performance of different geographies - Asia-Pacific, EMEA, LATAM, and North America.

AI and Machine Learning Engineer

Mar 2021 - Sept 2021

hibretOne-CIC, Birmingham

Part-Time

- Building a recommendation system for identifying possible failure points of businesses and start-ups by content-based filtering using cosine similarities on the reasons of failure, losses, and burn-out.
- Building a deep learning-based Speech2Text translation for voice-enabled responses and converting it into readable text.

Data Analyst and Engineer

Apr 2019 - Sept 2020

Packt Publishing, Birmingham and Mumbai

Full-Time

- Performing data analytics tasks for the finance team and business requirements, working as a part of the data team to maintain the data warehouse on AWS for managing ELT workflow management for products, orders, customers, and subscribers.
- Ensuring data pipeline meets business requirements and working on a broad suite of tools to achieve this, mainly Amazon Redshift, Matillion ETL, Python scripts, SQL, automation, etc.

Category Manager - Data Science, Cloud Computing and Web platforms

Nov 2016 - Apr 2019

Packt Publishing, Birmingham and Mumbai

Full-Time

- Ideation, new product development, and publishing strategies in the IT and software space to meet the learning needs of developers, customers, and licensing partners through immersive blended video and bespoke training.
- Responsible for establishing Packt as a leading and premium technical content provider in the programming, web development, gaming, cloud computing, DevOps, security, Data, and AI categories.
- Set a strategic path for the company, manage its investment in new products, and actively contribute towards the development of the company's broader product strategy.

PROJECTS

Bank Fraud Detection

- Machine Learning project on imbalanced data classification for classifying transaction frauds and building the best suitable model with an accuracy score of 0.9966 using XGBoost classifier.
- Challenger models used for comparison: K-nearest neighbors (K-NN), Support Vector Machines(SVM), Tree-based models - Decision Tree, Random Forest, Gradient Boosting models - XGBoost, LightGBM, CatBoost.
- Worked on different classification techniques by applying oversampling using SMOTE, stratified k-folds, grid-search cross-validation techniques, and finding the area under the ROC-AUC curve.

AI Medical Imaging Analysis for X-Rays and CT-Scans using Transfer Learning and Explainability

Project undertaken for final dissertation, which included open source chest X-rays and CT-Scan images, and classification for possible pathological lung conditions, Covid-19 predictions using transfer learning for computer vision, Vision Transformers (ViT) to aid in faster decision making for clinicians by providing explanations for the predicted results using Explainable AI (XAI).

Speech-To-Text Translation

Deep Learning based speech translation to aid handicapped or people with disability to take the voice responses and convert them into text for better understanding using Facebooks wave2vec model built using transformers for Natural Language Understanding and recording the voice note as text.

Recommendation System

Deep Learning and Natural Language Understanding-based recommendation system that can suggest possible reasons for the failure of a business for entrepreneurs, given a possible challenge faced in business, and what other challenges different businesses with similar problems have come across based on content-based filtering and language-based similarity matching using cosine-similarity of the reasons of failure, losses, and burnout in business.

EDGE Intelligence for Industry 4.0 using AI for industrial IoT

Analysis on EDGE Intelligence/ AI at the Edge with a study of approaches using AI for the Edge and AI on the Edge approaches for industrial usage and various other applications enhancing the quality of experience using AI for industrial IoT devices at edge locations; its possible use cases in smart metering, remote healthcare monitoring, smart hospitals, mining and energy generation, smart farming, environment sensing, supply chain and logistics, smart spaces, etc.

GDRP-bound email automation

Build a custom API for e-mail marketing automation for abandoned cart items in customer accounts, updating the entire list of automated marketing emails through Mailchimp as per customer preferences and their willingness to be contacted using hash-indexing and matching hash-indexes, thus building a service that complies with GDPR guidelines for delivering marketing emails to customers.

Marketing Campaign Analysis through A/B Testing for better conversion

Analysing the marketing campaign with an existing conversion rate of 10%. On further improving the UI design, the conversion rate increased by 2%, and the landing page experience improved by 1%. On redesigning the product page, it led to a 15% increase in the conversion rate .

Cloud Data Pipeline Management

Managing the data pipelines on the AWS cloud platform and Matillion ETL/ELT tool to bring the data into Amazon S3 and load it into the Redshift Data Lake and other warehouses, performing data cleaning to remove duplications to have a single source of truth for the daily and weekly staging data pipeline workloads. Also performing data migration from different databases to maintain a single source of truth to be used further.

Finance Transactions Reporting

Performing monthly and quarterly reporting for cash and revenue transactions and online subscriptions using custom-built APIs in Python using Pandas and Numpy libraries, providing monthly insights to the finance team, based on which the royalties were calculated and given out to book authors, video course instructors, and trainers.

Production-ready Automated reporting with Power BI

Creating and publishing Power BI reports, migrating legacy reports, and pivot table reporting to fully automated Power BI dashboards. Created 25+ dashboards for services and business reporting needs, monitoring KPI performance updates on a daily/weekly/biweekly/monthly basis in an automated way. Using various features to drill-through, drill-down, cross-pages linking, forecasting, geographical GIS-maps, and many others, as well as data modeling, data governance within Power BI.

Embedded web-app interface combining BI reports and forms for note-taking and commentaries

Created a web app using Streamlit and DuckDB in Python, which integrates embedded Power BI published reports along with custom forms for taking notes and adding commentaries to the published reports, and stores the comments in DuckDB. The web app works on CRUD functionality for note-taking and commentaries hosted in a Dockerized environment, and added role-based access for the users/internal stakeholders.

EDUCATION

Aston University

MSc. in Artificial Intelligence

Birmingham, U.K.

Sept 2020 - Oct 2021

Imperial College

AI Specialization - TensorFlow 2 for Deep Learning

London, U.K.

Mar 2021 - Apr 2021

Greater Noida Institute of Technology

B.Tech in Mechanical Engineering

Noida, India

Jul 2008 - Jun 2012