

Prathamesh Kulkarni

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PROFILE SUMMARY

Experienced AI Engineer and former Data Scientist with a proven track record of delivering innovative solutions across domains including Gaming and Betting, Fintech, Automobile, Trade Finance, and Logistics at bizAmica Software and Sky Betting and Gaming. Seeking opportunities as an AI Engineer, Data Scientist, Data Analyst, or Business Analyst.

PROFESSIONAL EXPERIENCE

Feb 2023 - Present AI Engineer, bizAmica Software Pune, India

- **Logistics Chatbot for Airport Facilities and Dock Management:** Developed a chatbot for a **logistics client** to answer queries related to airport facilities, docks, and live statuses based on Airway Bill (AWB) numbers. The bot provides real-time information on flight status, dock management, and delivery details, aiding freight forwarders, trucking companies, and airport authorities in efficiently managing cargo. Technologies used include **AWS Lex, Lambda, EC2 for deploying FastAPI, and LLMs** for handling dynamic queries and intent identification. This solution enables quick and seamless access to crucial information, **enhancing overall cargo management**.
- **IVR for Logistics Client:** Engineered an **Interactive Voice Response (IVR)** solution integrating **Language Models (LLMs)** tailored for logistics clients, resulting in a notable **reduction of 30-40% in calls** typically handled by customer support agents. This innovative system enhances operational efficiency by automating routine inquiries and streamlining customer interactions, ultimately improving overall service delivery.
- **LLMs in izDox AI Platform:** Leveraged large language models (LLMs) to optimise the **izDOX AI Platform's** document processing pipelines, extracting more comprehensive and accurate data than previous models while requiring fewer training data. This enhancement improved information **extraction accuracy by 25%** in financial and logistics documents.
- **Testing Platform for izDox AI Platform:** Designed and managed the development of an automated testing platform to expedite and enhance the accuracy of product testing, **reducing testing times by 85%**. This system streamlined operations by automating repetitive tasks, allowing testers to focus on refining testing strategies. Additionally, integrated data analytics capabilities provided insights into model performance enhancements over time, ensuring continuous improvement.
- **Fault Detection using Computer Vision in Assembly Lines:** Led an initiative to **detect 100% of silent faults** in PLC programming for an **automotive client**, leveraging advanced computer vision and pattern-matching techniques to analyse thousands of pages with intricate logic involving Normally Open/Normally Closed component positions. This solution yielded a remarkable **10X efficiency improvement**, mitigating the risk of assembly line breakdowns and ensuring uninterrupted production flow.

Skills: Python, SQL, Django, API development, Chatbot Development, AWS Lex, AWS Lambda, EC2, Large Language Models (LLMs), Natural Language Processing (NLP), Database Management, Real-time Data Processing, IVR Development, Automation, Customer Support Optimization, Document Processing, Data Extraction, Model Optimization, Automated Testing, Data Analytics, Agile Methodologies, Performance Analysis, Product Testing, Computer Vision, Pattern Matching, Fault Detection, Efficiency Improvement, Jenkins, Docker, Terraform, Ansible, ECS, Server Management and Deployment.

Jun 2022 – Oct 2022 Data Scientist, Sky Betting and Gaming Leeds, United Kingdom

- **Bonus Abuse Fraud Detection:** Successfully developed a machine learning model, **achieving over 95% accuracy** in detecting monthly bonus abuse fraud cases. This deployment automated previously manual processes, significantly enhancing operational efficiency.
- **Model Explainability and Stakeholder Empowerment:** Implemented advanced model explainability techniques to empower stakeholders in identifying fraudulent customers. Developed a compelling **business case** for incorporating two **new features**, which further enhanced the model's predictive capabilities and improved fraud detection accuracy.
- **Threshold Optimization Using Tailored Mathematical Formulas:** Developed a customised **mathematical formula** to determine **ideal thresholds** for flagging customers as fraudulent or legitimate. This **formula accounted for monetary impact and potential losses** on business operations, integrating business-specific metrics such as financial implications and risk tolerance. This approach facilitated more accurate and targeted fraud identification, minimising potential losses.
- **Data-Driven Insights for Business Decision-Making:** Provided data-driven insights to guide business decisions regarding including new variables in fraud detection models. Conducted comprehensive analyses to evaluate the **impact of existing and additional variables** on fraud detection accuracy and business outcomes. These assessments empowered stakeholders to make informed decisions, optimising fraud detection strategies and effectively mitigating risks.

Skills: Python, SQL, Machine Learning, Model Deployment, Google Cloud Platform (GCP), Docker, Fraud Detection, Automation, Operational Efficiency, Model Explainability, Stakeholder Engagement, Feature Engineering, Predictive Modeling, Mathematical Modeling, Threshold Optimization, Data Analysis, Visual Tool Development, Risk Assessment, Business Metrics Integration, Business Intelligence, Data-Driven Decision Making.

EDUCATION

Oct 2021 – Oct 2022 Master of Science in Data Science, Lancaster University Lancaster, United Kingdom

Aug 2016 – May 2020 Bachelor of Engineering in Electronics and Telecommunication, Sinhgad Institute of Technology and Science Pune, India

LANGUAGES English(C2), Hindi(C1), Marathi(Native), French(A2)