

Soham Khopde

ML Engineer | Business Data analyst

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Professional Summary

Dedicated Machine Learning Engineer / Data analyst professional with history of developing multiple machine learning projects, performing thorough data analysis, python developer and proven skills in business analysis.

Professional History

Data analytics Consultant

Integrated Learning Systems India Private Limited

Remote

08/2022 – 04/2023

Responsibilities:

Project 1: Neonatal Sepsis Prediction

Project Description: PreSco is a web application which uses machine learning algorithms to provide for an early risk assessment of Neonatal Sepsis and aids in informed decision making for antibiotics. PreSco is non-invasive and provides a rapid risk assessment of babies.

Responsibilities:

- Requirement Gathering (BRD, SRS) and analysis for Predictive Scoring application.
- Conducting Brainstorming sessions for strategic data analysis planning.
- Managing change strategy for data analysis plan and Machine Learning process.
- Developing and improvising Process model for Machine Learning Application
- Designing Wireframes in Figma and creating web application forms using React-MUI and node js.
- Multi-variate Exploratory Data analysis and Model Prototyping in Jupyter Notebook.
- Development of Pipeline process of Data cleaning & Transforming, Encoding (Label Encode) & Imputing (KNN imputation), rectifying classification bias (Imbalance Learn) to develop machine learning model (sci-kit learn, lightGBM) with optimal metrics in Flask framework.
- Creating Sequence diagrams, use case scenarios and performing interface analysis for input validation of model.
- Using feature engineering techniques like Recursive Feature Selection,

Education

- **Master of Information Technology(PC)- Data Analytics (Testamur - [Link](#))**

Swinburne University of Technology
Hawthorn, Victoria, AU

- **Bachelor of Engineering (Computer Science)**

K.C. College of Engineering, Thane

Skills

Business analysis

- Requirements Gathering & Elicitation (BRD, SRS, FRD, Project Plan & Report)
- Wireframes and Prototyping in Adobe XD
- Process Analysis, Modelling and Improvement
- UML Diagrams & Architecture & process flow diagram in MS Visio & in Figma.
- UAT (Test Cases), Solution Evaluation using KPI and metrics.

Business Intelligence and Visualization

- SSIS, SSRS, Azure Data Factory
- Power BI, Tableau
- Data Modelling

Database

- Advanced MS-SQL (Stored Procedures Optimization, Query plan Execution)
- Azure SQL DW

Data Analysis & Machine Learning

- Multivariate EDA
- Data Pre- Processing & Cleaning
- Data Imputation, Encoding
- Feature Engineering, PCA
- K-fold Cross Validation, Ensemble Voting Classifier,

SelectfromModel, PCA to improvise model metrics.

- Assessing threshold values using Hyper-parameter tuning, k-fold cross validation to configure model parameters for optimal accuracy of the model.
- Performing User Acceptance Testing before production release.

Tool Stack:

- Python, My SQL, Flask, Machine Learning (scikit-learn, lightGBM, imbalance learn, pandas, scipy), Figma, MS Visio.

Capstone Project (Master's Research Project)

Smart Farming IOT Mobile application

Swinburne University of Technology

Role : Business Technology Analyst

Hawthorn, VIC

08/2020 - 12/2020

Project Description: A Flutter application built to monitor farm atmosphere, quality of milk based on IOT data and notify farmers about an anomaly with regards to temperature of milk silo and weather conditions. It also helps to notify farmers about the schedule and location of the milk truck.

Responsibilities

- Documentation of Functional requirements, Non-Functional requirements, system requirements and technology stack in Software Requirement Specification document.
- Assisting in Product Features, use cases, Wireframe design and prototyping in Adobe XD.
- Designing system architecture, sequence diagram and data flow diagram in MS Visio.
- Developing navigation drawer and basic layout for the application using interface analysis.
- Developing application code to streamline IOT sensor data through API to notify temperature or atmospheric changes on farm.
- Code cleaning and User acceptance testing before deployment.

Technology Stack:

- Adobe XD, Stoplight API, Microsoft Visio, Flutter (Dart), Cross-platform Deployment (iOS , android)

Neural Networks(MLP Classifier), Hyper-parameter tuning

- Main Libraries - Scikit-Learn, scipy, Pandas, imbalance-learn, lightGBM, Flask.

Certifications

Business Analysis

- IIBA CBDA



- Exposure to IIBA ECBA standards and techniques

Business Intelligence

- Enterprise DNA
 - Scenario Analysis-Deep Dive Power BI
 - Budgeting and Forecasting
 - Advanced Analytics in Power BI
 - Financial Reporting with Power BI

Achievements

- <https://avyantra.com/> - Predictive Scoring Application for detecting sepsis infection in infants below 1 year.