Team – LockNCode

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CUSTOMER

CHURN PREDICTION

Problem Statement: "Develop a machine learning model that predicts customer churn for a subscription service. The model should analyze user behavior patterns, demographics, and engagement metrics to identify at-risk customers, enabling proactive retention strategies."

Introduction and Background

- Customer churn refers to when customers stop using a service, leading to revenue loss for companies.
- Predicting churn is critical for subscription-based businesses to improve retention and reduce customer turnover.
- Machine learning models can help identify customers who are at risk of churning by analyzing their behavior and preferences.
- By proactively addressing churn risks, businesses can tailor their strategies to keep customers engaged and satisfied.
- This project focuses on building a churn prediction model that uses customer data to forecast churn and provide actionable insights.

Solution

- The project involves building a machine learning model to predict customer churn based on various features related to user behavior and preferences.
- The model will take inputs such as account age, monthly charges, content preferences, and support history to forecast churn risk.
- The front-end will include visualization plots that highlight trends and insights to help the company understand the root causes of churn.
- An interactive chatbot will provide suggestions to the company, offering recommendations to reduce churn and align services with customer needs.
- This comprehensive solution allows companies to take proactive steps to retain customers and prevent churn.

TECHSTACK

React JS

NEXT JS

TailwindCSS

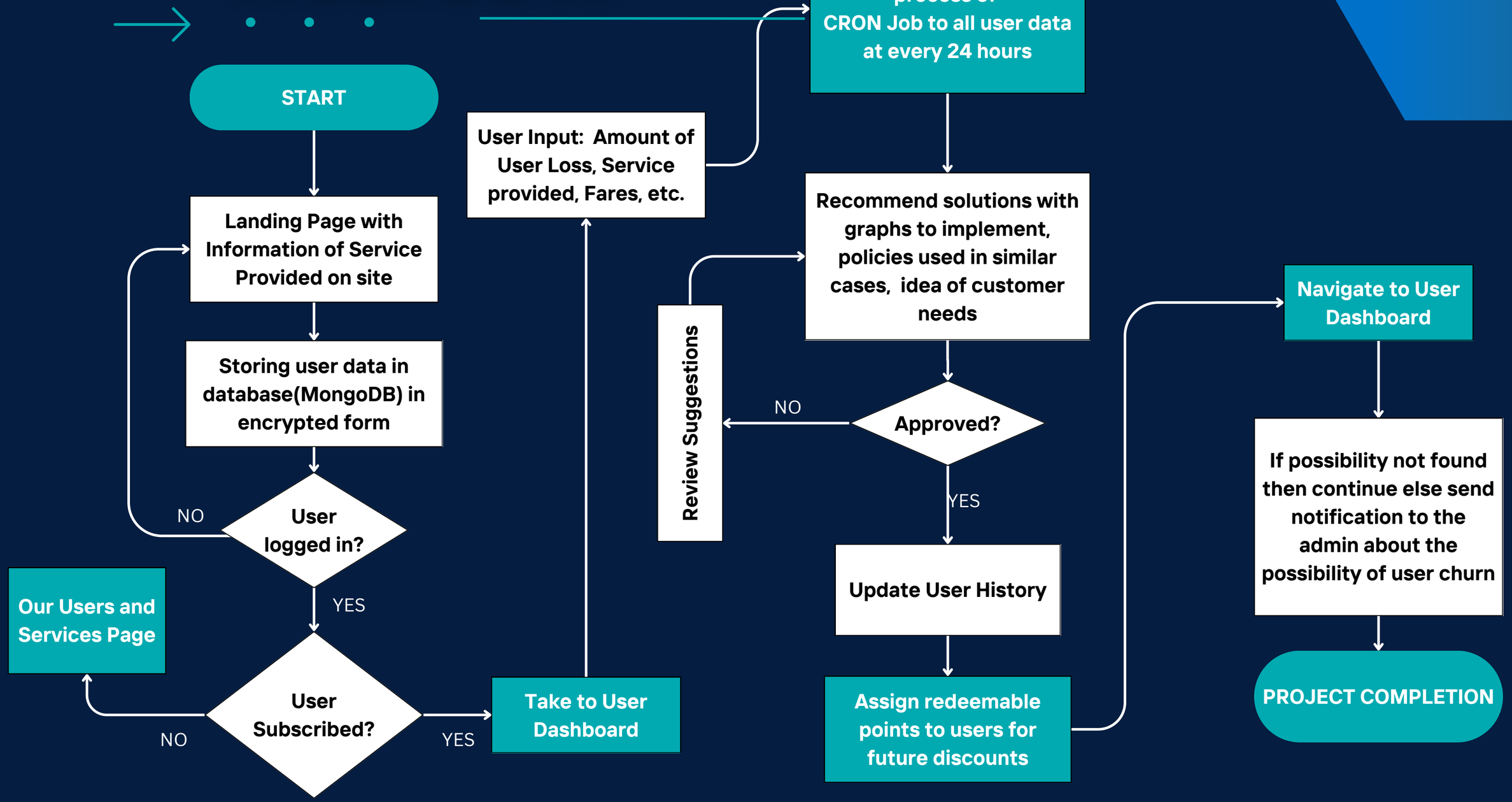
TensorFlow

Neural Networks

Random Forest

Ensemble Learning Techniques

WEBFLOW


START
Landing Page with Information of Service Provided on site
Storing user data in database(MongoDB) in encrypted form
User logged in?
NO
YES
Our Users and Services Page
User Subscribed?
NO
YES
Take to User Dashboard
User Input: Amount of User Loss, Service provided, Fares, etc.
Applying automated process of CRON Job to all user data at every 24 hours
Recommend solutions with graphs to implement, policies used in similar cases, idea of customer needs
Approved?
NO
YES
Review Suggestions
Update User History
Assign redeemable points to users for future discounts
Navigate to User Dashboard
If possibility not found then continue else send notification to the admin about the possibility of user churn
PROJECT COMPLETION

Impact

- Large-scale companies stand to retain more customers by accurately predicting churn and addressing the factors that lead to customer dissatisfaction.
- Proactive retention strategies reduce customer acquisition costs and improve long-term profitability.
- By addressing user pain points, companies can increase customer satisfaction, reducing churn and driving revenue growth.
- The visual analytics dashboard and chatbot provide valuable insights that enable companies to optimize their services and tailor offerings to customer needs.
- Preventing churn at scale ensures continued growth, maximizing profits and securing a loyal customer base.
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