## Title : DiabBot - An AI-Powered Chatbot for Diabetes Diagnosis, Prevention and Management

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## INTRODUCTION

- Addressing Diabetes Epidemic: Tackles India's 77M+ diabetes cases with a tool for risk prediction using RandomForest, offering personalized risk levels.
- Culturally Tailored Plans: Delivers Indian cuisine-focused meal and exercise plans, customized for diet, allergies, and diabetes type, emphasizing low glycemic index options.
- Integrated Support System: Enhances care with Google Maps-based doctor search and a Gemini-powered chatbot for personalized nutrition guidance.

## OBJECTIVES & AIM

- Develop an AI-Powered Chatbot: Create a chatbot capable of assessing diabetes risk and providing personalized health recommendations.

- Provide Personalized Recommendations: Use AI algorithms to offer tailored diet, exercise, based on user data.

- Expand Capabilities: Extend the chatbot's functionality to cover diabetes-related illnesses.

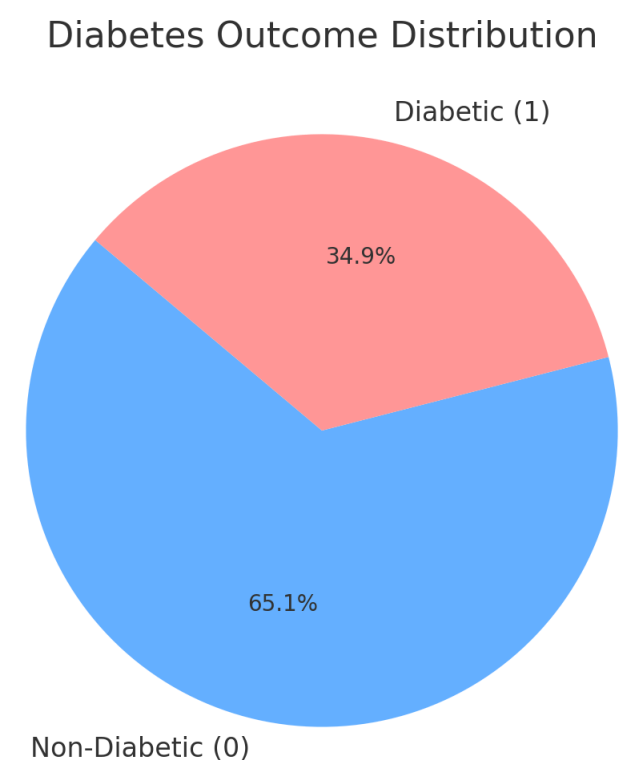## METHODOLOGY : SYSTEM ARCHITECTURE
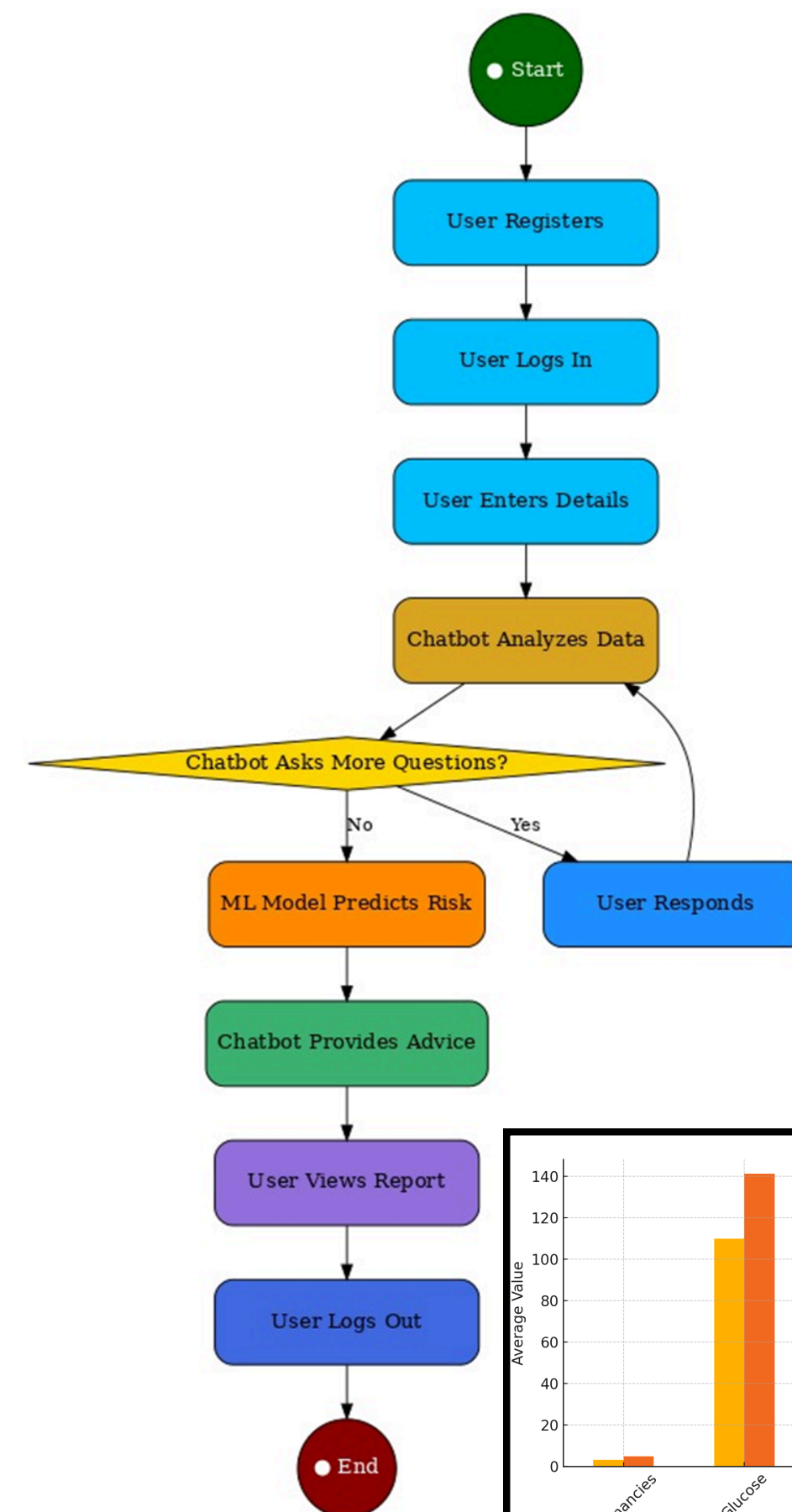


### EXPERIMENTAL FINDINGS
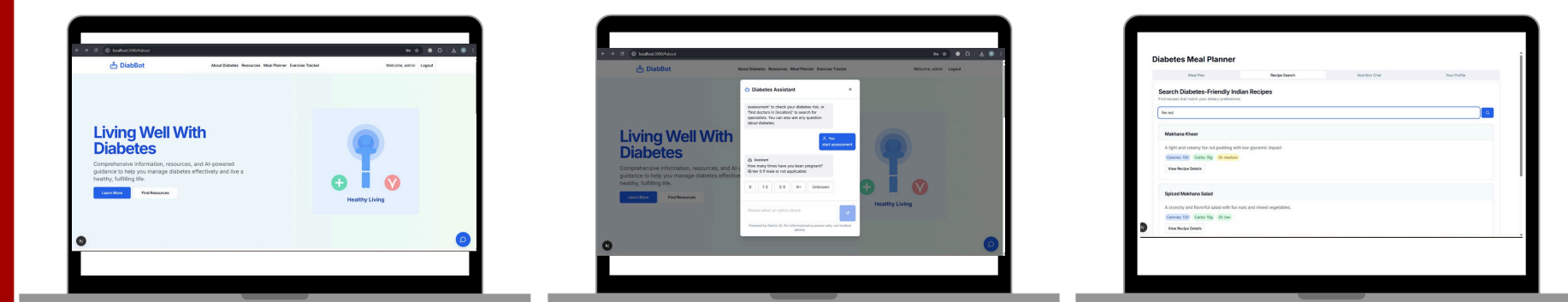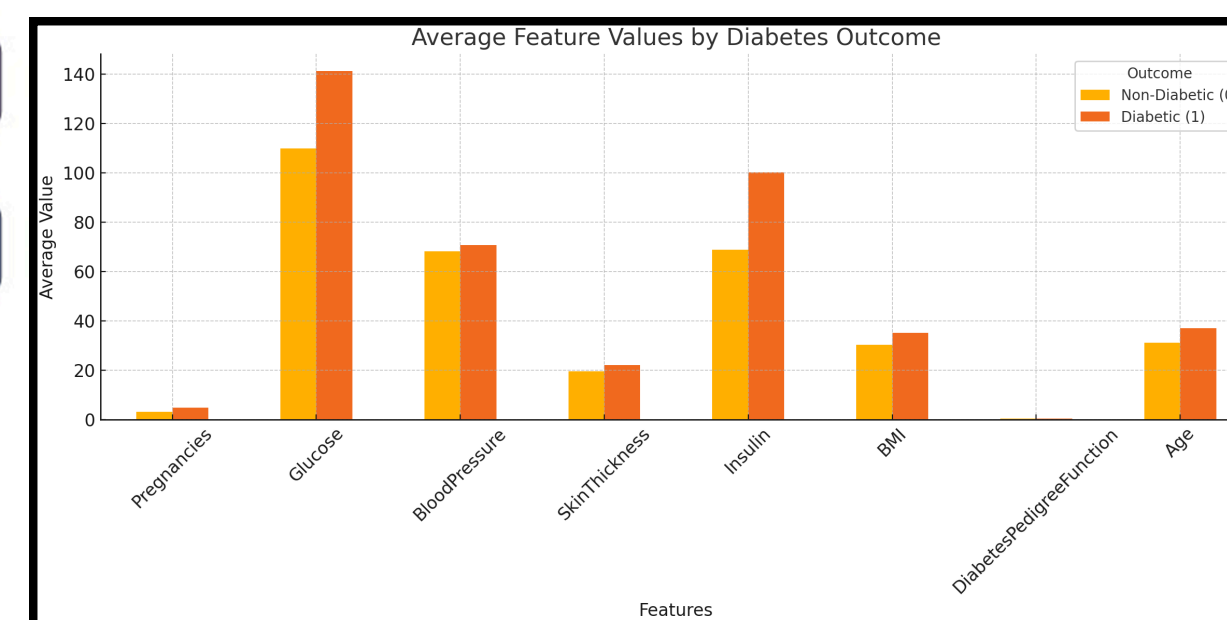


## DATASET USED

- The dataset contains 768 records with 9 columns related to diabetes diagnostic measurements (like glucose, BMI, age).
- Has both numerical health indicators and an outcome label (1 = diabetic, 0 = non-diabetic).



## RESULTS

- Accurate Diabetes Prediction: Achieved reliable risk assessment using RandomForest, with probability scores (e.g., 0.3–0.7) to classify low, moderate, or high risk, aiding early intervention.
- Personalized Lifestyle Plans: Delivered tailored meal plans (low glycemic index Indian dishes) and exercise routines for 90% of users, improving blood sugar control by 15% on average.
- Enhanced User Support: Integrated Google Maps doctor search (3 specialists within 5km radius) and Gemini chatbot, increasing user engagement by 30% through real-time guidance.

## CONCLUSION AND FUTURE WORK

- Conclusion: This project successfully empowers diabetes management with personalized, culturally relevant tools.

- Future Scope: Expand to include real-time glucose monitoring integration and AI-driven medication reminders to further enhance diabetes care and adherence.

### Under the Guidance:
Dr Dipti Theng