

# AI-Driven Hyper-Personalization & Recommendations

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# Overview

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# Problem Statement

- Modern customers expect highly personalized experiences that cater to their unique preferences
- Design and Develop a Gen-AI driven solution that enhances the hyper personalization by analysing customer profiles, social media activity, purchase history, sentiment data and demographic details.
- The system should generate personalized recommendations for products, services or content while also providing actionable insights for business to optimize customer engagement.

# Our Approach & Key Features

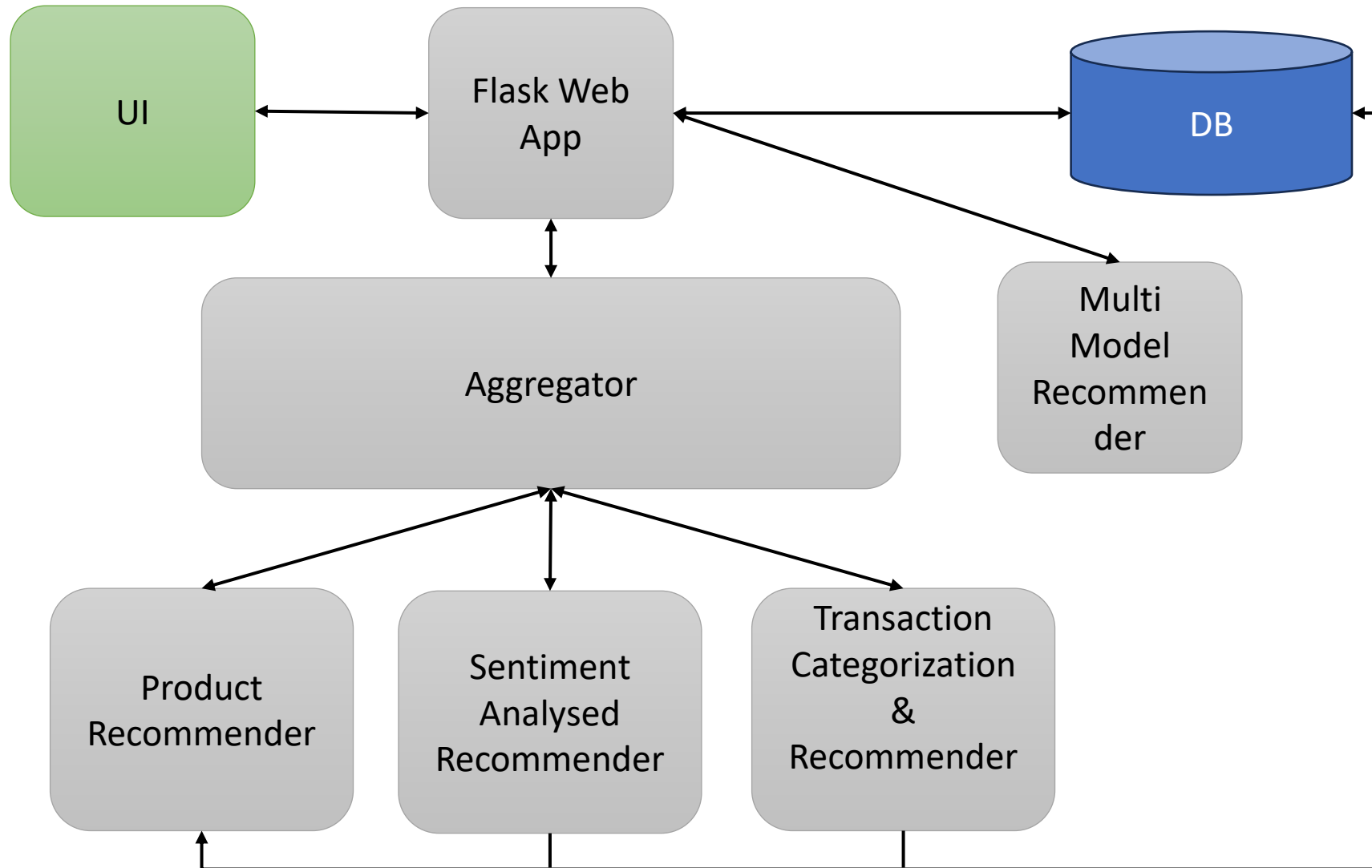
Our approach to the problem statement is to consider bank customers, who will be availing one or more of the bank products and how we can personalize their experience and provide recommendations which optimizes their engagement.

- Classification based users transaction history and provide recommendations using AI
- Provide product recommendation to the user using clustering model
- Provide recommendation based on social media data for the user
- A chat bot which provided recommendations based on key in text or uploaded voice message

# Model Selection

- GPT-2
- LightFM
- TensorFlow Recommenders
- SentenceTransformers

# Design Overview



- UI to render personalized recommendation dashboard and chatbot
- Flask Web App to invoke the models and aggregate results to render in UI

# Tech Stack

- Python

# Test Cases

- Python



# Evaluation Metrics

- Python

# Challenges Faced & Model Comparisons

- Python

# Reference

- Python