



## Customer dashboard & Merchant Recommender



# Merchant Recommendation

XYZ  
Bank

*Customers spend at various merchants using their credit cards. 1) How customers keep track on their spend 2) How bank can send right offers to the customer*

## Business Case



### Track Customers' Spend Behaviour on Credit Cards

Spending trend in categories of merchants like food and drink, clothing, healthcare etc.

### Recommend offers to customers on specific merchants

Discounts on future transactions in merchants customer might like



## Analytical Solution

### User based Collaborative Filtering technique used to provide merchant recommendations

Based on Customer spend and demographics, identify similar Merchants/ customers and recommend new merchants\*

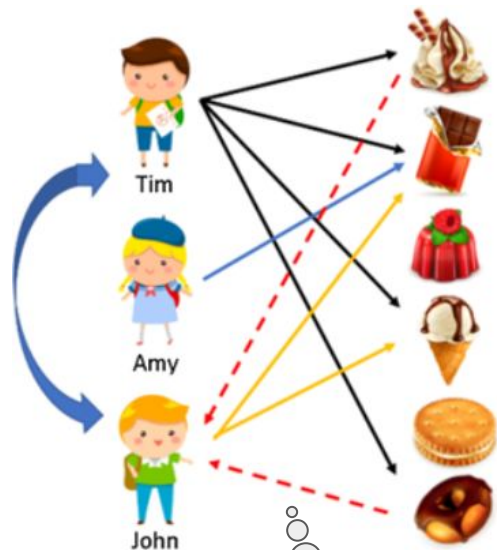


*Three months of credit card transactions (June to August 2020) are analysed for 100 random customers. In the user interface recommendations and discounts are provided for customers to avail.*

\* Excluded already spent merchant from recommendation

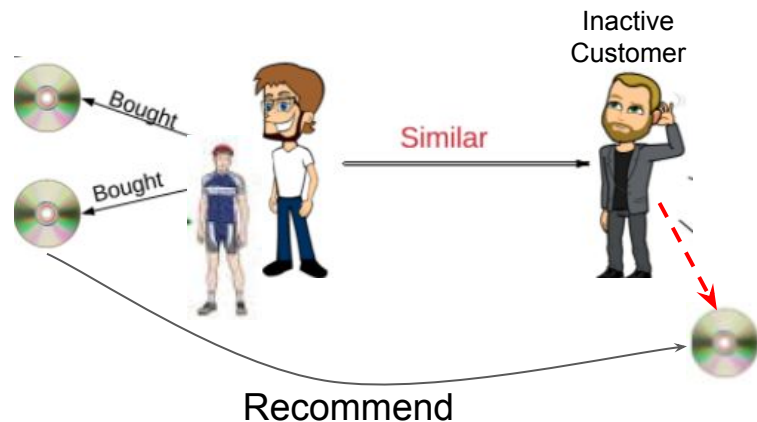
# Recommendation Engine

## User-User Collaborative Filtering



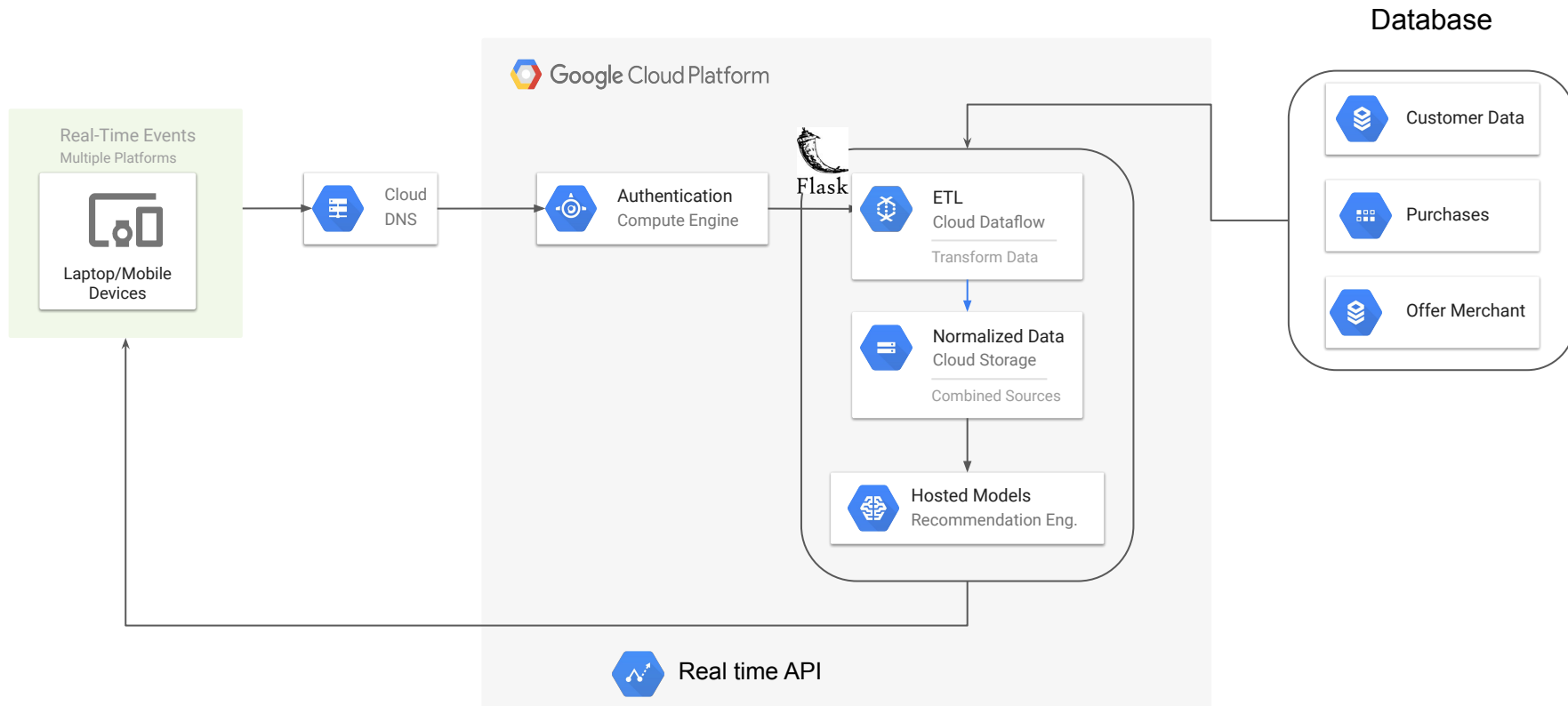
Can't Recommend for  
Inactive customer

## Similar user based on Demographics

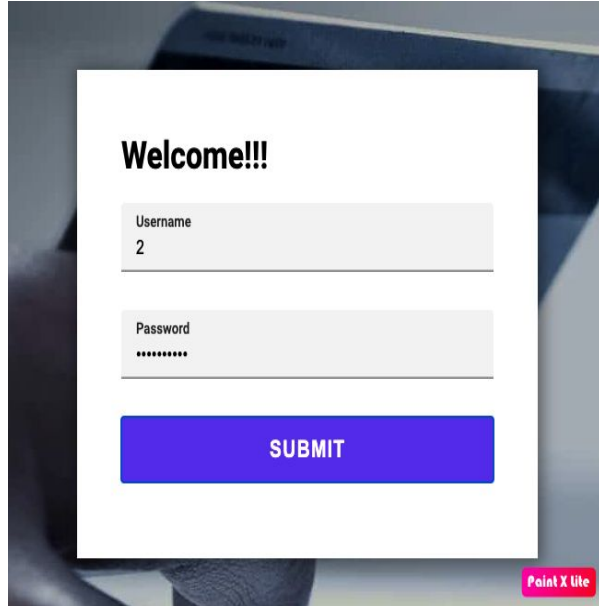


## Recommend

# Architecture



# Dashboard Screenshot + UI



A login form with a white background and a blue border. It features a 'Welcome!!!' heading, a 'Username' field with the value '2', a 'Password' field with masked characters, and a blue 'SUBMIT' button. A small red 'Point X lite' badge is in the bottom right corner.

Welcome!!!

Username  
2

Password  
\*\*\*\*\*

SUBMIT

Point X lite



## You may like!!!

Using your XYZ credit card ends with 0005

- **15% cashback** for purchase on **Canara**
- Get **10% instant discount** on **BP**
- **10% cashback** for purchase on **Tambola**
- Get **5% instant discount** on **McDonalds**
- Get **100 points** for purchase on **LIC**

Point X lite

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# Learnings & Way forward

- Build APIs for viewing portfolio level product KPIs (like balance movements of loans/credit cards etc.) for quick reference and better visualization by product holders or business counterparts.
- Create APIs for visualizing trends in customer demographics and product holdings (with availability of data in GCP).
- Use github for version control for codes in most projects