

# Design Document for AI (Awesome Insights 🙌)

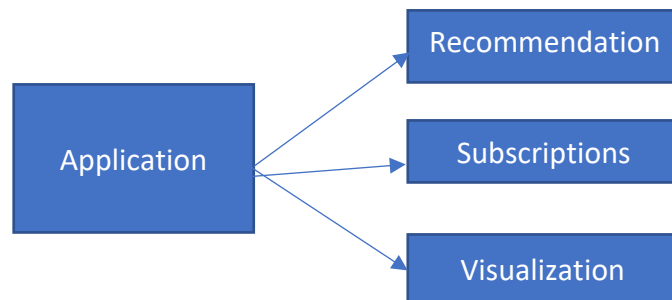
## Project Goals

- Don't let the customer go!
- Build multiple insights in terms of sales, recommendations and understanding customer behavior
- Determining the grey areas in business, optimizing them to increase average order value (AOV).

## Modules and Deliverables

- A web-app which consists of a set of modules.
  - Inference driven insights
  - Product recommendation
  - Suggest subscriptions

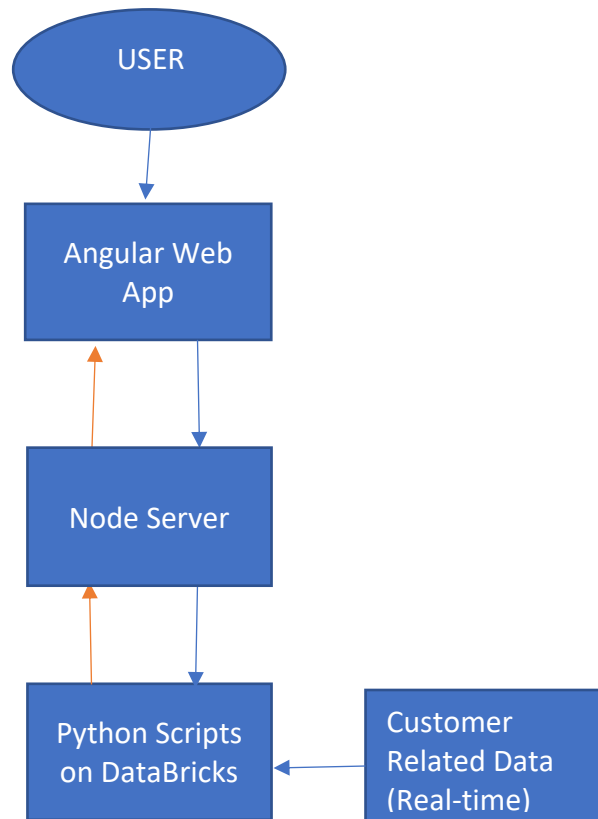
## Description



- Insights - Various visualizations plotted against multiple features which influence the business. Examples include, deriving the correlation between 'Date of product purchased' and the 'date of product added to cart' and many more.
- Product recommendation - Using *MARKET BASKET ANALYSIS* to understand the correlation between various products and then recommend the user a product.
- Suggest subscriptions - Identify customers purchasing items at regular intervals, Offer them subscription at some discount for a fixed period. The discount can be calculated on the basis of *TRUST INDEX*. Trust Index depends on quantity and frequency of items bought considering time interval

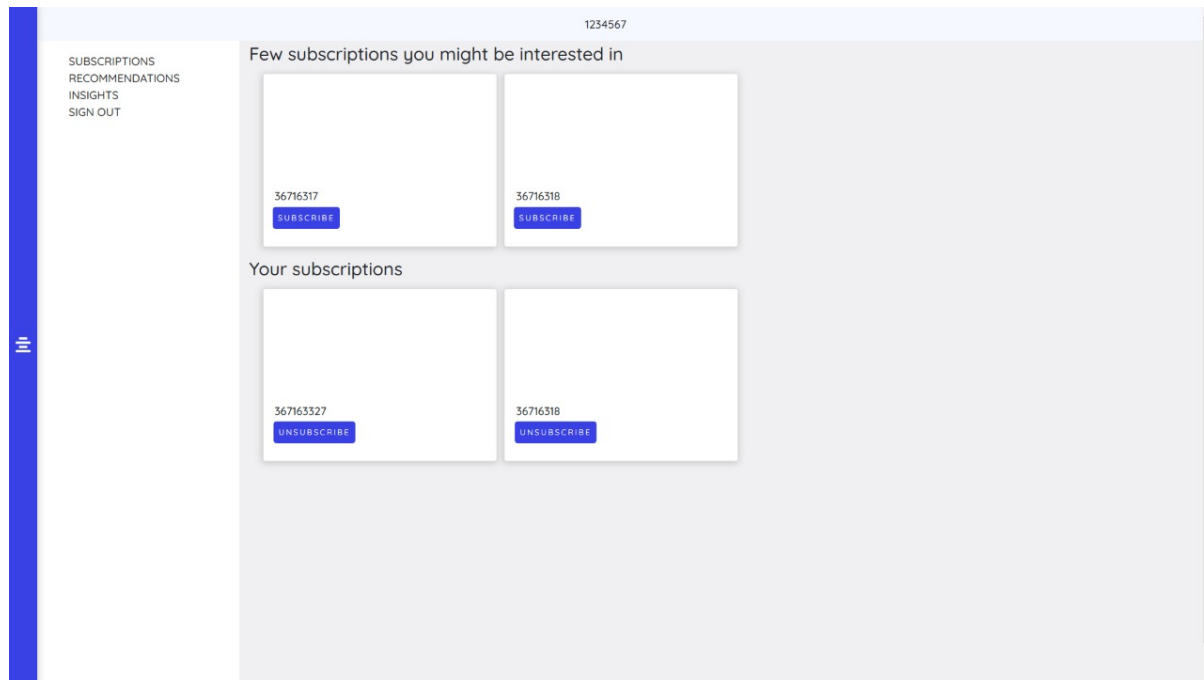
### ***Architecture of solution***

- Flow – User logs-in to the web-app using some credentials, He selects one of the three available modules. A request is made by the UI to the backend which runs on a Node server. Based on the type of request raised, different type of python scripts are invoked and the result is sent back in the form of a json file. Since we do not have the access to the databricks api, we have implemented a work around by processing the data before-hand.



### ***User Interface***

- The user interface is entirely built on Angular, which involves different types of inputs like text fields, button-clicks.
- A snapshot of the basic version of UI (Under development)



### **Input**

- Inputs from the user can be the login credentials (user\_id in this case).
- Types of button-clicks include recommendations, insights and suggested subscriptions.

### **Functional Requirements**

- From user's perspective, an internet connection and a basic browser would get the job done.
- From a developer's perspective, Angular, node, pandas, scikit-learn, matplotlib, cufflinks, seaborn and Tableau

---- **Awesome Insights** 🙌 ----