Tutorial 01

a)

Precise store in-out timings

Timing of items browsed / picked up / returned to shelves.

Customers movements across sections / shelves

Demographics data through app

b)

Metric: unit to quantify

Measures: numeric data of metrics

\*Key metric must be specific to clients\*

|  |  |
| --- | --- |
| **Metric** | **Measurement** |
| Browsing Time | * Time of item placed in basket. * Time of item returned to shelf |
| Browsing Order | Sort the time of items picked up in ascending order |
| Browsed but unpurchased | Check if item is placed back on shelf after being picked up |
| Brand Choice | Items purchased > items picked but unpurchased > items ignored |
| Spending Habits | * Average payment per shopping trip * Price of selected items – average price of item category |
| Number of customers in-store | Sum number of customers who have tapped-in but not tapped out |

c)

Descriptive: (Compute current and past performance)

* What is the total number of customers each day?
* Which are the popular brands among customers?

Predictive: (Analyze patterns from historical data and extrapolate)

* How many customers are we likely to have on a Monday?
* Given a particular brand and item category, how much sales do we expect to make over a certain time frame

Prescriptive: (Optimization)

* How do we optimize the allocation of staff?
* How many items should we stock to ensure a balance between supply and demand.

d)

Analytical Challenges

* Variety of data
* Volume and velocity of incoming data
* Accuracy of identification matching

Busines Challenges

* Possible privacy concerns
* High investment in technology

2.

(a)