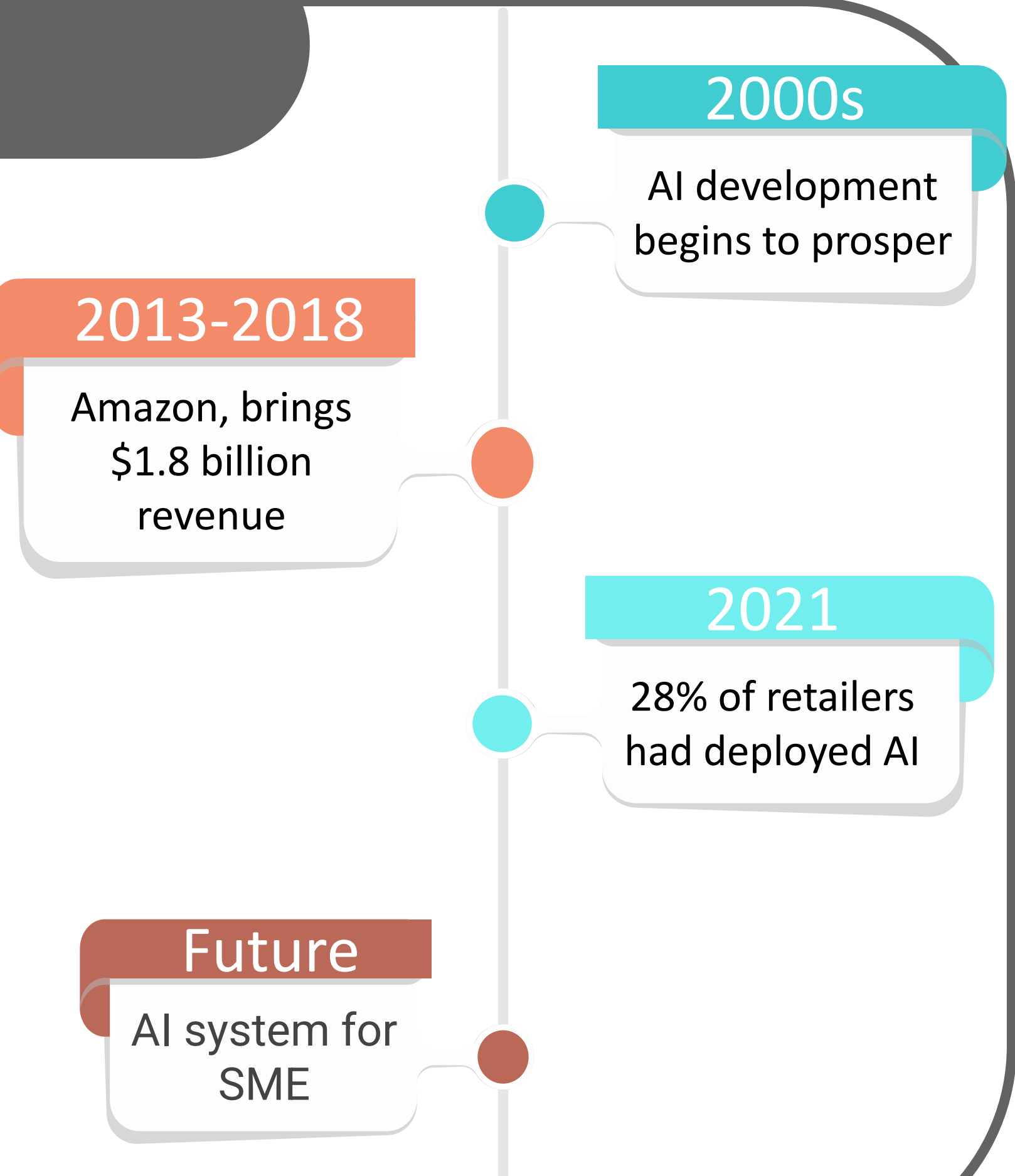


Retail Systems with AI Support to Discover Purchase Behavior and Devise Business Strategies

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Supervisor: Mr WU Sing On Johnson, Lecturer

BACKGROUND

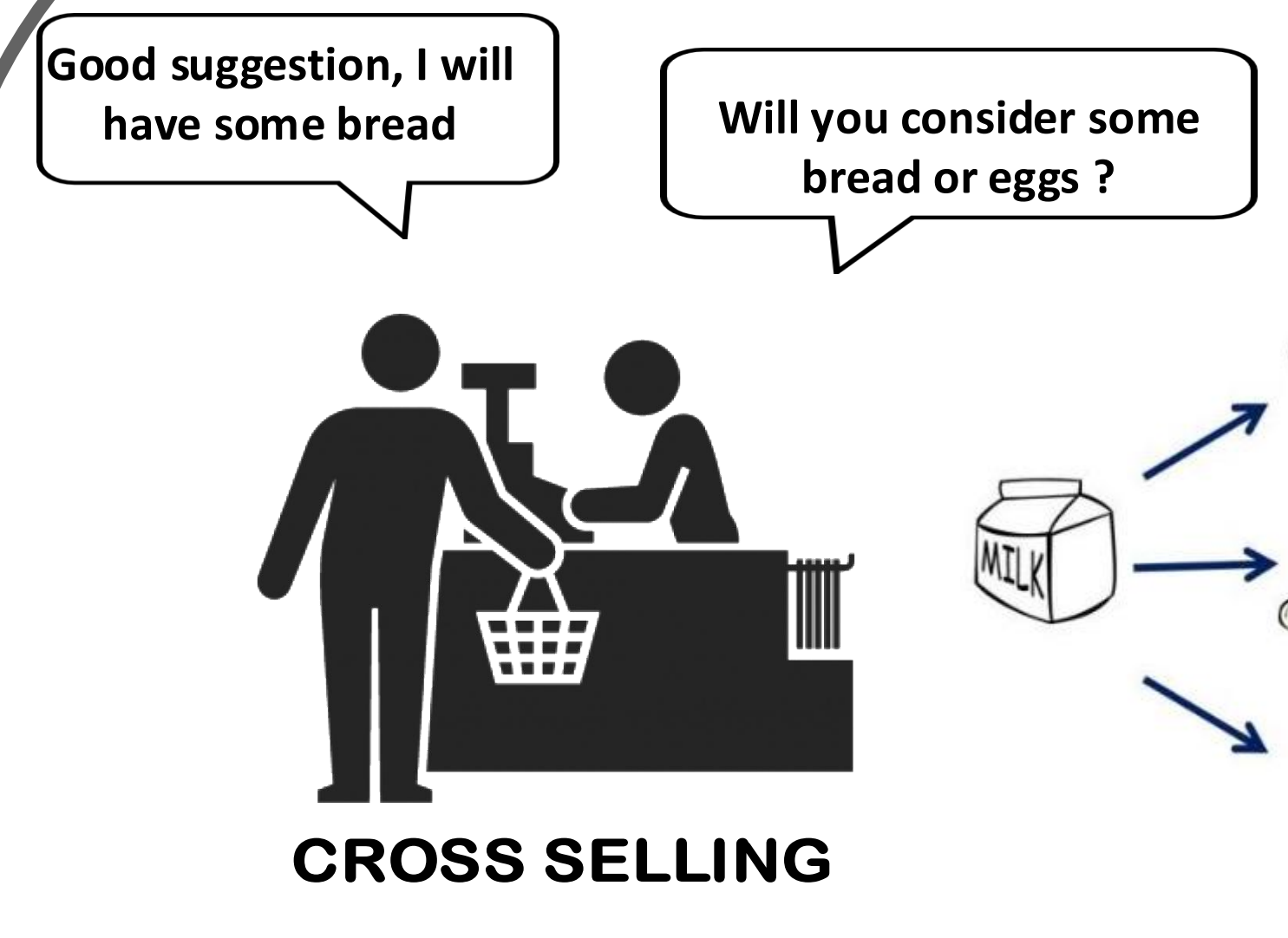
AI brings a new level of data processing and most of the larger enterprises (e.g. Amazon) integrate AI into their business. However nearly all small and medium enterprises (SME) are not using AI in their business due to a lack of skill since AI is too complex for them.



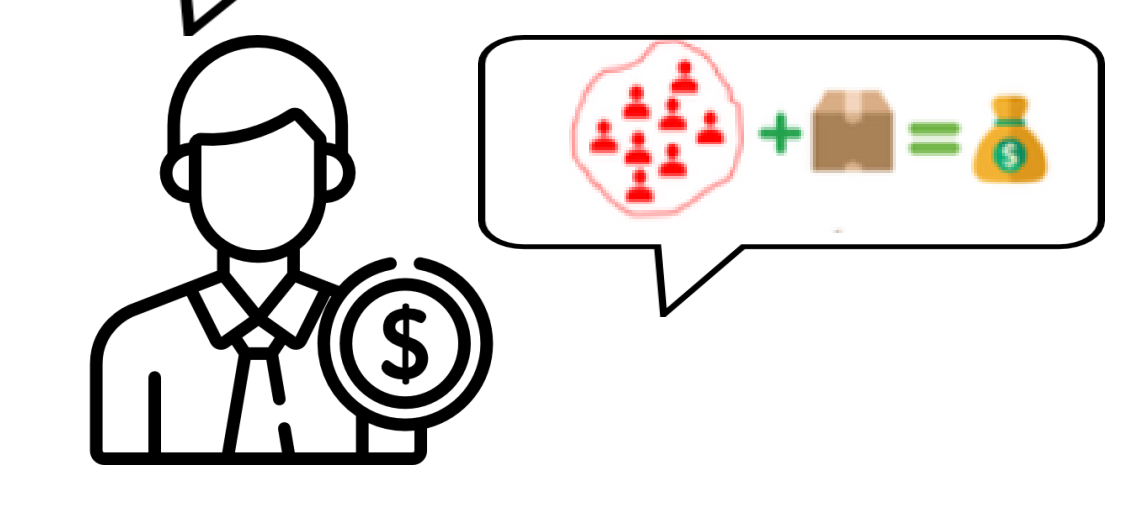
RESEARCH OBJECTIVES

- Low Cost
- Process Daily Sales Transaction
- Customer Segmentation
- Cross-Selling
- Release Graphic Charts & Reports
- E-campaign for e-marketing

AI MODEL DEVELOPEMENT



We should promote to sell this product to customers in Cluster 1

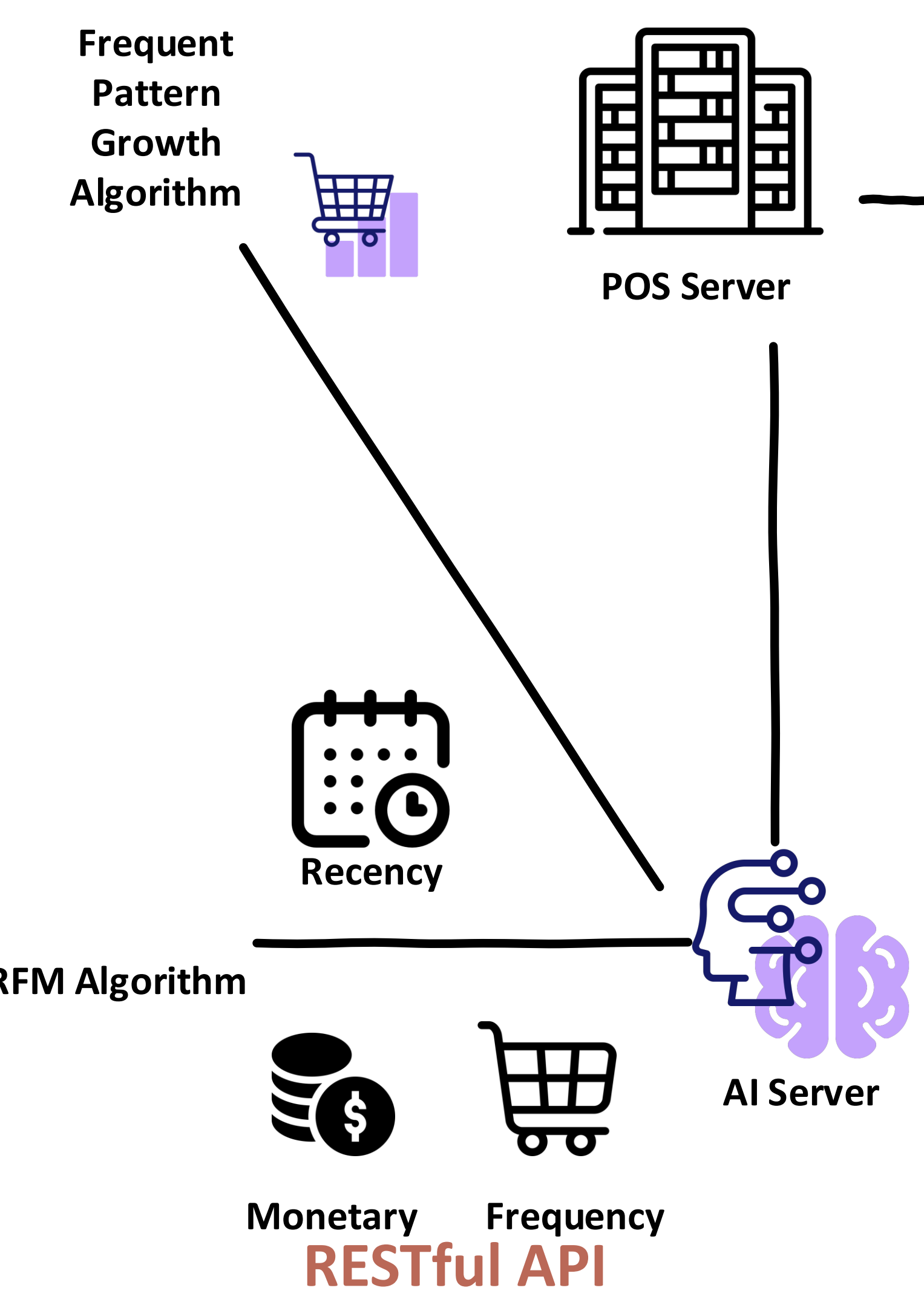


SYSTEM DEVELOPEMENT

Multi-tiers architectural system design using Java EE and MySQL database

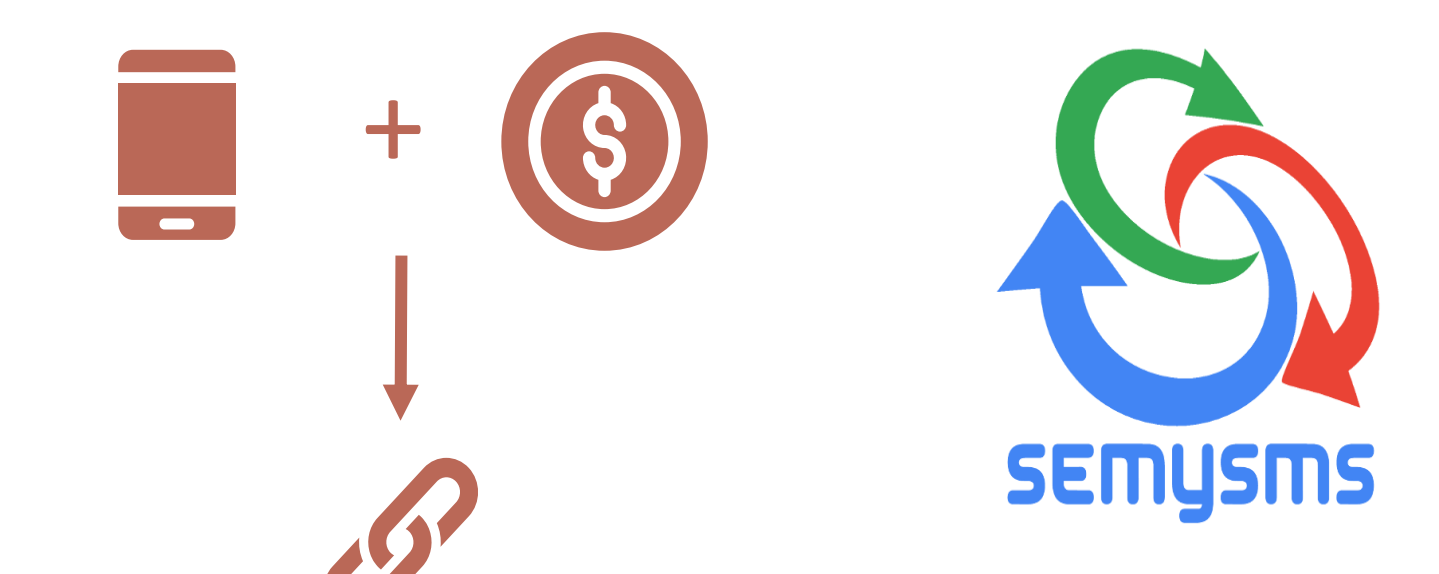


METHODOLOGY



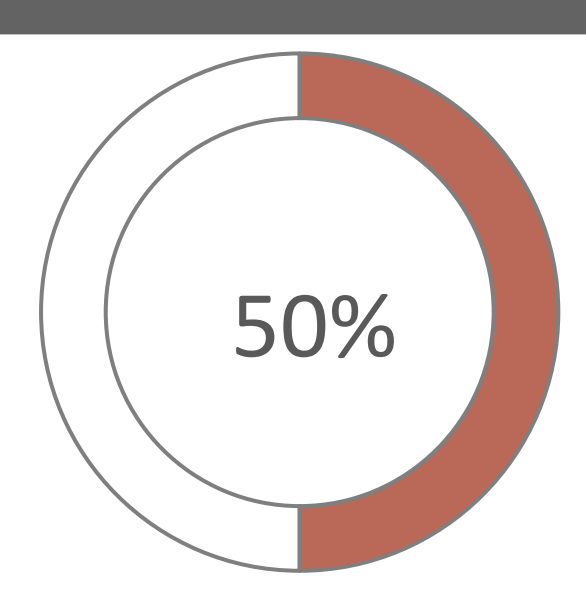
SMS DEVELOPEMENT

Sending notification message through SEMYSMS. Register a mobile device and create token first. Then put the device ID and token into the URL for sending message.

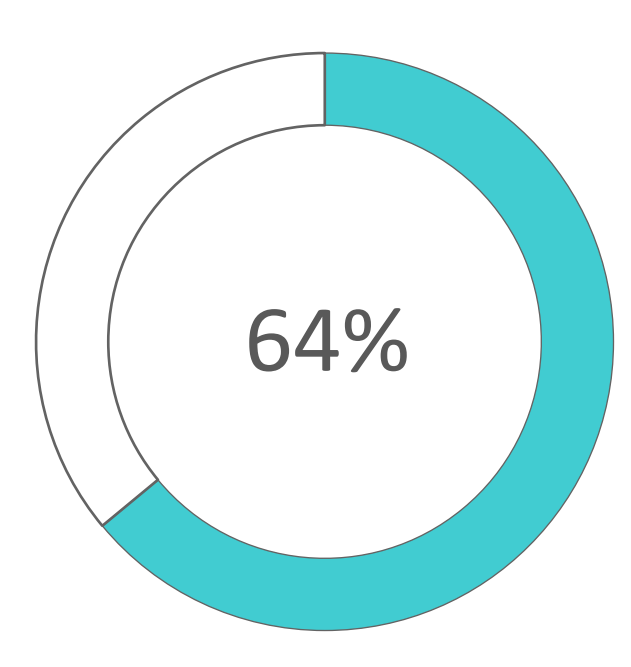


The system will send a request to the REST server to perform AI analysis. Once analysis is done the REST server will send a response back for display. System will also send a request to the SEMYSMS (Cloud based REST Server) for sending promotion message to customer.

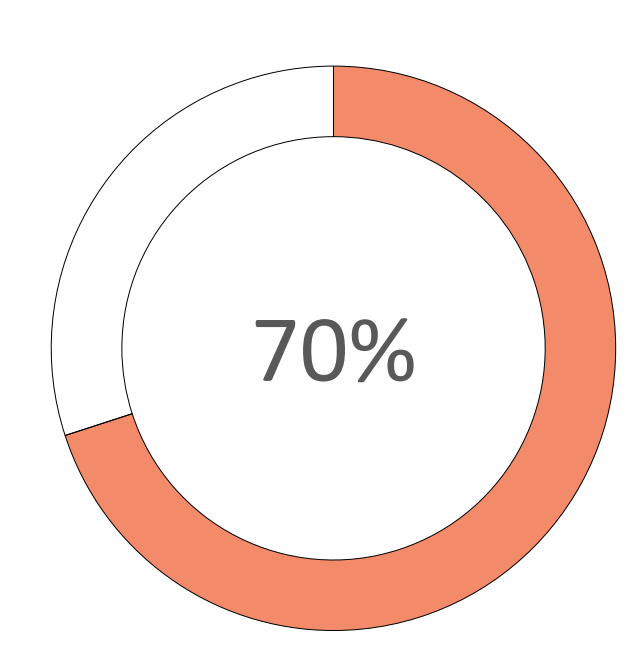
FINDINGS



DISCOVER UNSEEN PATTERN
Most of the customer belongs to cluster 2 with high purchasing power (\$8900)



SUCCESSFULL RODUCT RECOMMENDATION
Majority of customers will purchase products recommended by the system



SUCCESSFULL PERSONALIZED PROMOTION
Personalized promotion helps to expand business market. Currently over half of the sales are benefited from personalized promotion

