VABADAS

VOICE ASSISTED BANKING AND ANOMALY DETECTION WITH ALEXA SKILL

Malia Harris, Breanna Seitz, Tazreen Khan,
Padma Prabagaran

WHAT IS VOICE ASSISTED BANKING?

- Using voice commands via a digital assistant to access banking information
  - Ex: Checking account balance, pay bills, send or request money
- Security/Privacy Concerns:
  - Transferring of sensitive banking data
    - Encryption
  - Unauthorized parties interacting with digital assistant
    - Password Protection

DEMO

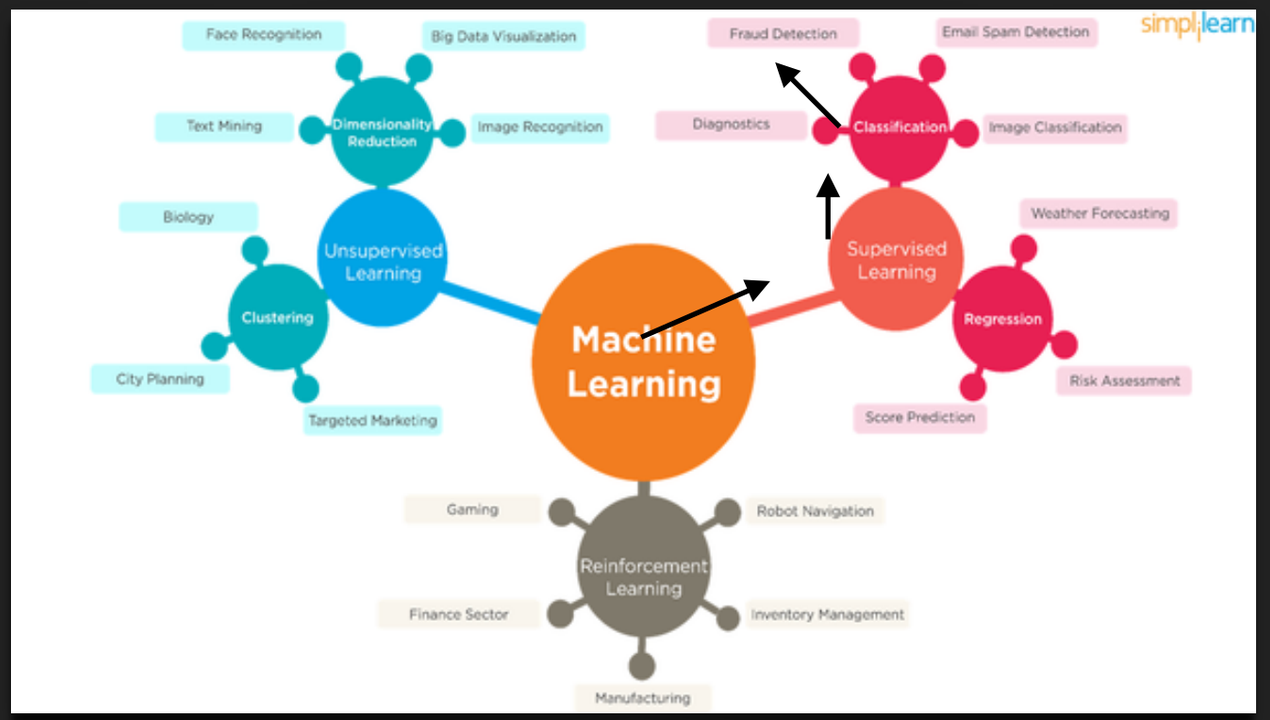
VOICE ASSISTED BANKING WITH SECURITY IMPLEMENTATION

TRANSACTION ANOMALY DETECTION USING MACHINE LEARNING

CONCEPTUAL

- Uses machine learning algorithms to create a set of patterns that indicate regular user behavior.
  - Able to distinguish between spending splurges and possible identity theft instances

- Models would be trained using customer data
  - Will not be stored or modified
  - Support Vector Machine (SVM), Quadratic Discriminant Analysis (QDA), Logistic Regression (LR)

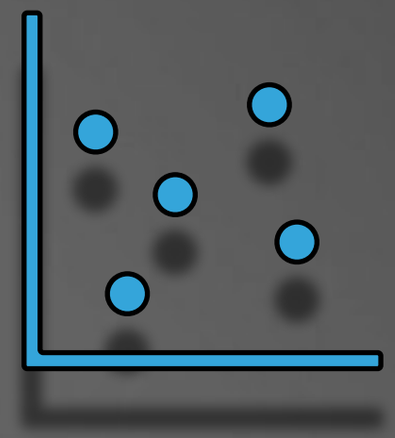


DATA

SPLURGES

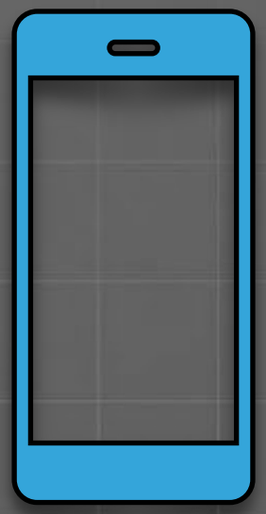
ANOMALIES

NORMAL INPUTS



$$$

$$



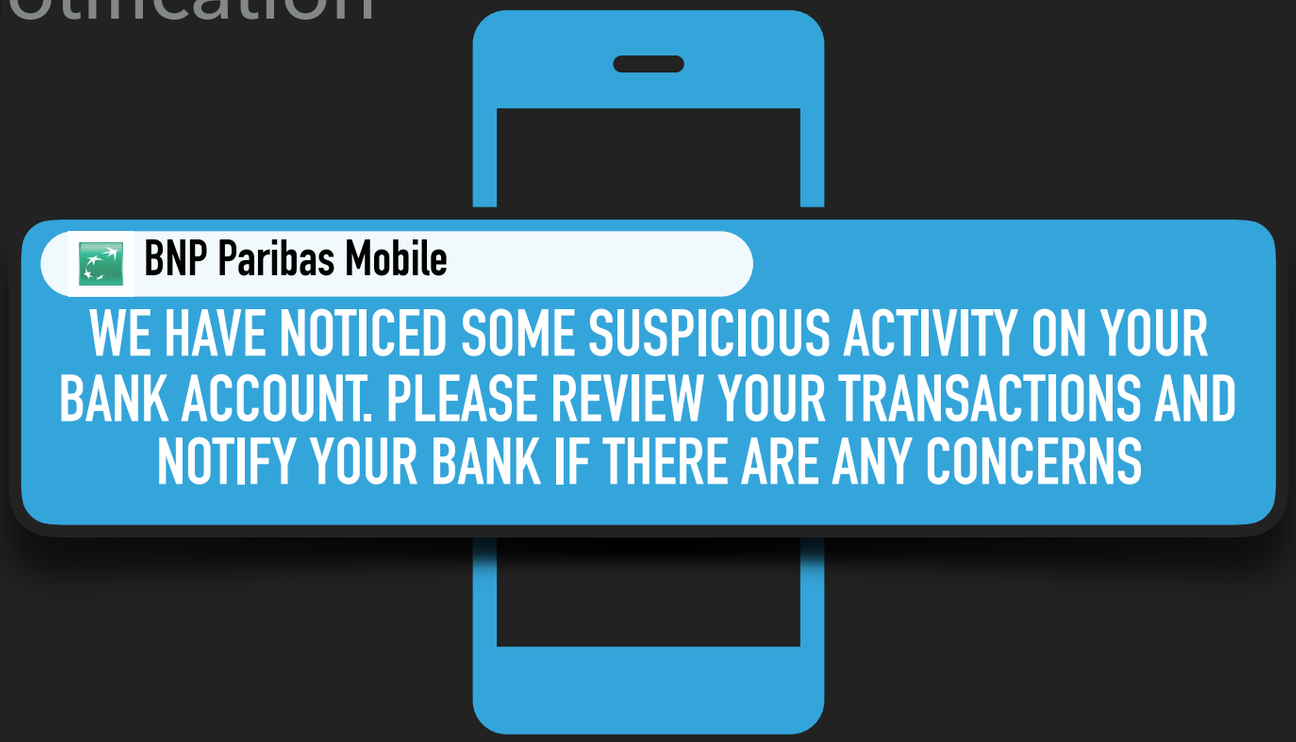
"ANOMALY DETECTED!"

DEMO

ANOMALY NOTIFICATION ALEXA SKILL

ADDITIONAL BENEFITS

- Eliminates the middle man
  - Reduce effectiveness of social engineering methods
- Real-time monitoring and notification



THANK YOU!