Using Your Data to Give Your Customers Superpowers

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1. Identify a problem
2. Frame your problem as a machine learning model
3. Train your model
4. Productionize your model

Voila

Source: Giphy

Step 1
Identify a problem

“When you have a hammer
Everything looks like a nail.”

- Abraham Maslow

Rant over

Source: Giphy

Definitions

- Two types of machine learning problems:

  Supervised & **Unsupervised**

- Two types of supervised learning problems:

  Classification & **Regression**

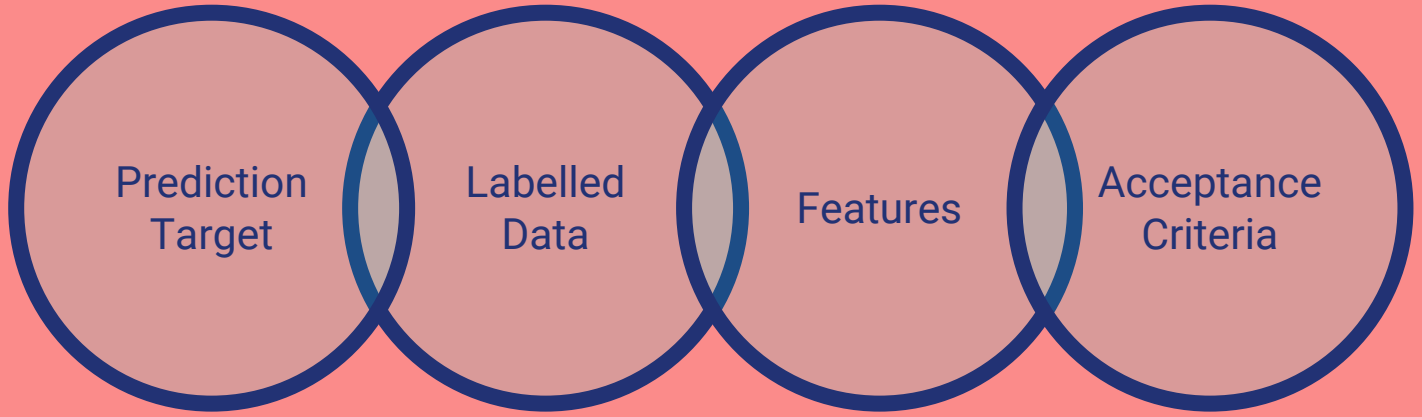
If you can frame your problem as a classification or regression problem with consistent input features,
It is a very good candidate to solve with machine learning

Examples

- Order fraud detection
- Deciding eligibility for Shopify Capital cash advances
- Classifying merchants by industry

Step 2
Frame Your Problem as a Machine Learning Model

An ML algorithm needs:



A Prediction Target

Source: clipartpanda

Labelled Data

Source: buffalotechconsulting.com

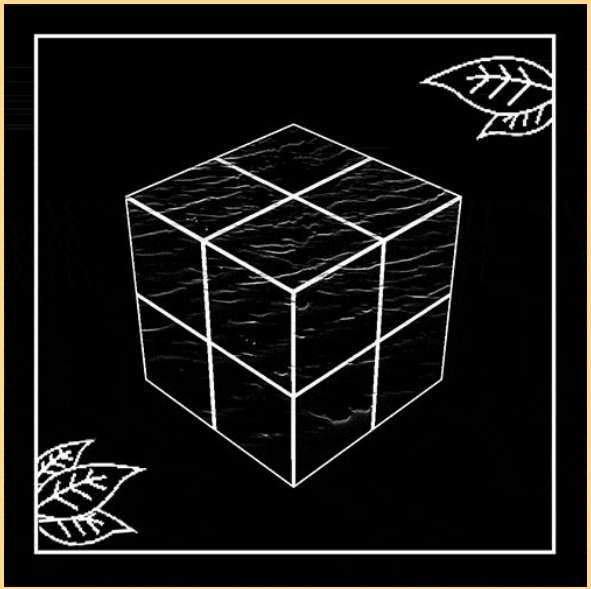
Features

Source: komparu.com

Acceptance Criteria

Source: giphy.com

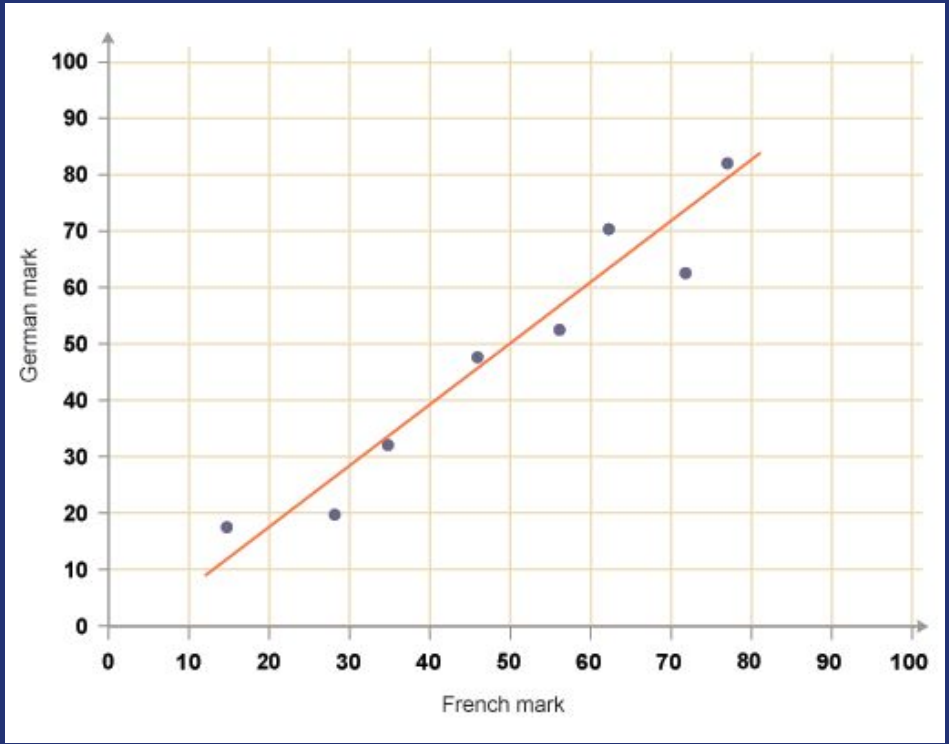
Step 3
Train Your Model



Source: giphy.com

A very very oversimplified example

$$y = mx + b$$



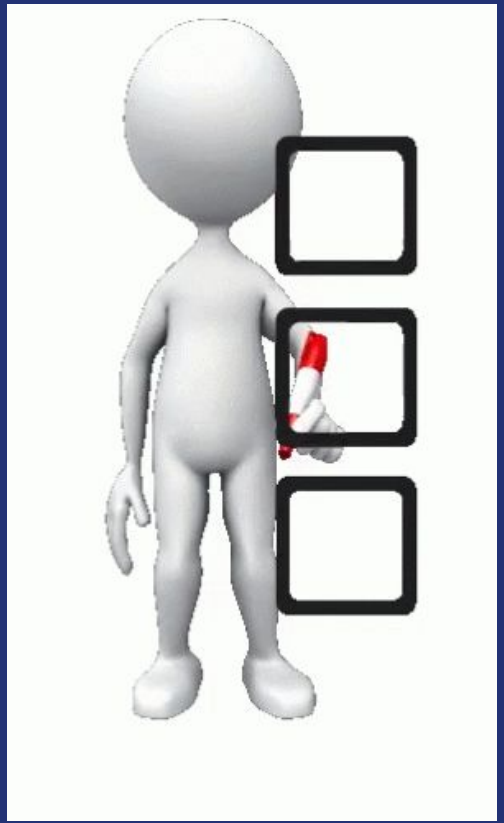
Source: tes.com

Further Reading:

- Models: Linear Regression, Neural Networks, Random forest, Support Vector Machines (SVM's), decision trees
- Libraries/Frameworks: Tensor Flow, PMML
- Detailed courses: Google Developer's "Machine Learning Crash Course", Coursera's "Machine Learning" course

Step 4
Productionize your model

Verification



Source: tenor.com

Deployment

Source: worditout.com

The Future

Source giphy.com

Requirements for ML Products

Required	Not Required
• Understanding problem domain • Holistic knowledge of ML process • Software engineering/CS core concepts • Curiosity to experiment	• Degree in Mathematics/Statistics • Formal data science training

Thanks!

shopify