Understanding Machine Learning with R

GETTING STARTED IN MACHINE LEARNING

Jerry Kurata
CONSULTANT

@jerrykur www.insteptech.com

Module Overview

What is Machine Learning?

Machine Learning vs Traditional Development

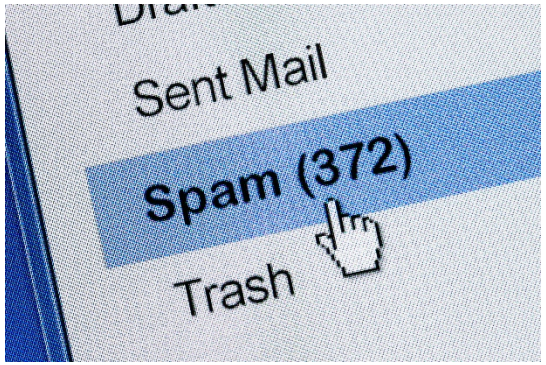
Types of Machine Learning

Course Content

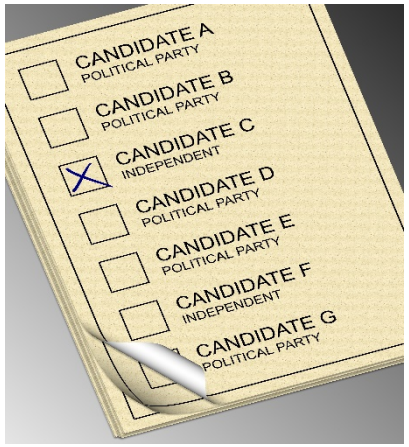
Machine Learning and Data Science

Machine Learning in Action

Is this email spam?

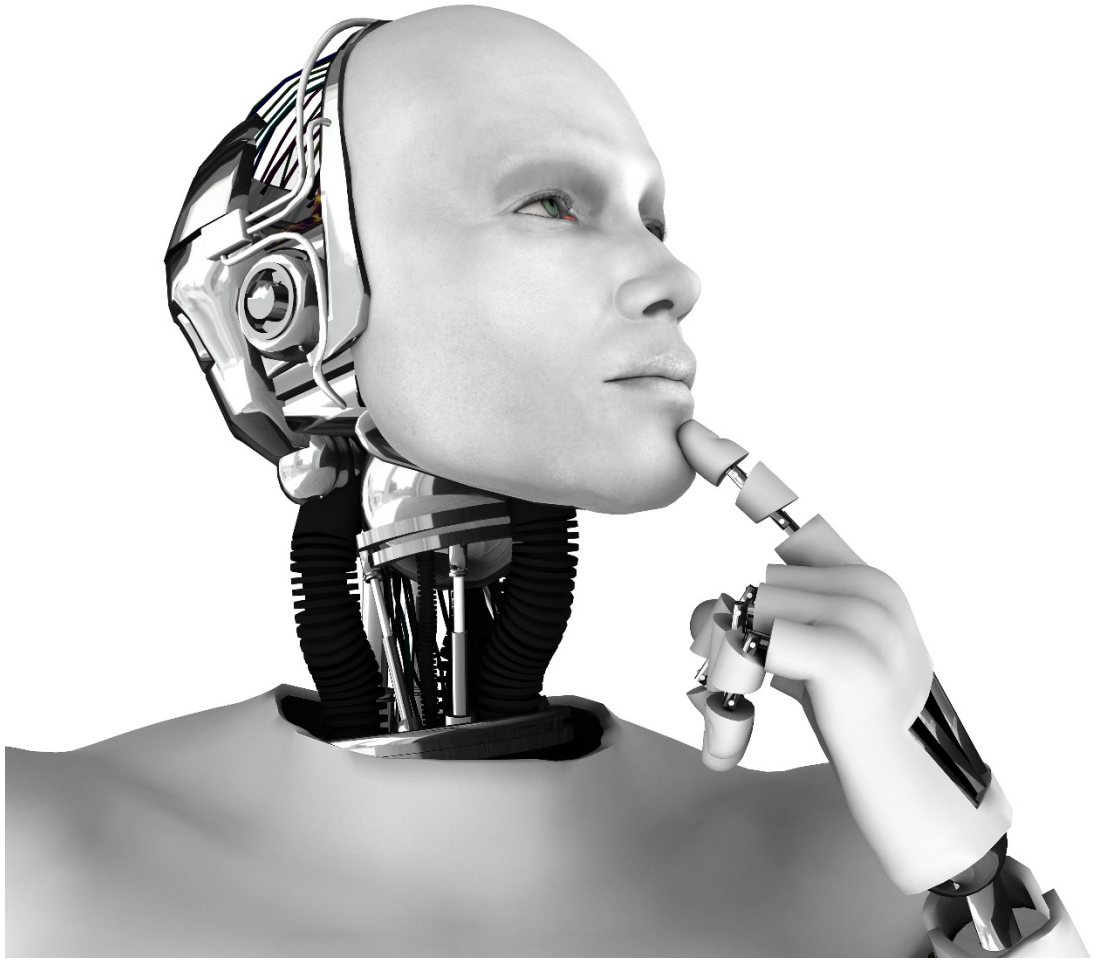


How will people vote?



What will people buy?

What is Machine Learning?



Machine Learning

Building a model from example inputs to make data-driven predictions vs. following strictly static program instructions.

Machine Learning

Building a **model from example inputs** to make data-driven predictions vs. following strictly static program instructions.

Machine Learning

Building a model from example inputs to make data-driven predictions vs. following strictly **static program instructions**.

Traditional Control Logic

If

Case

While

Until

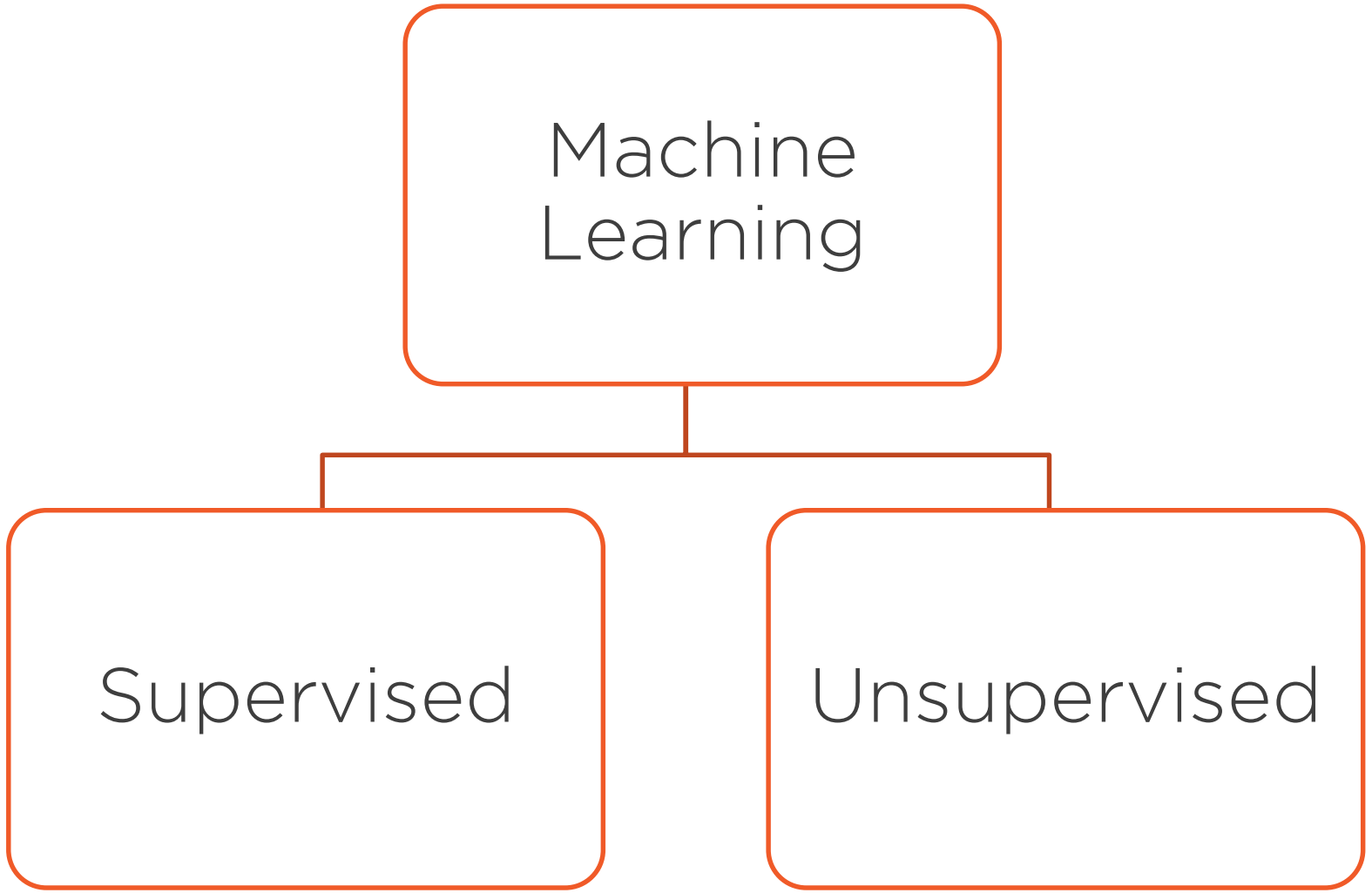
Machine Learning Logic

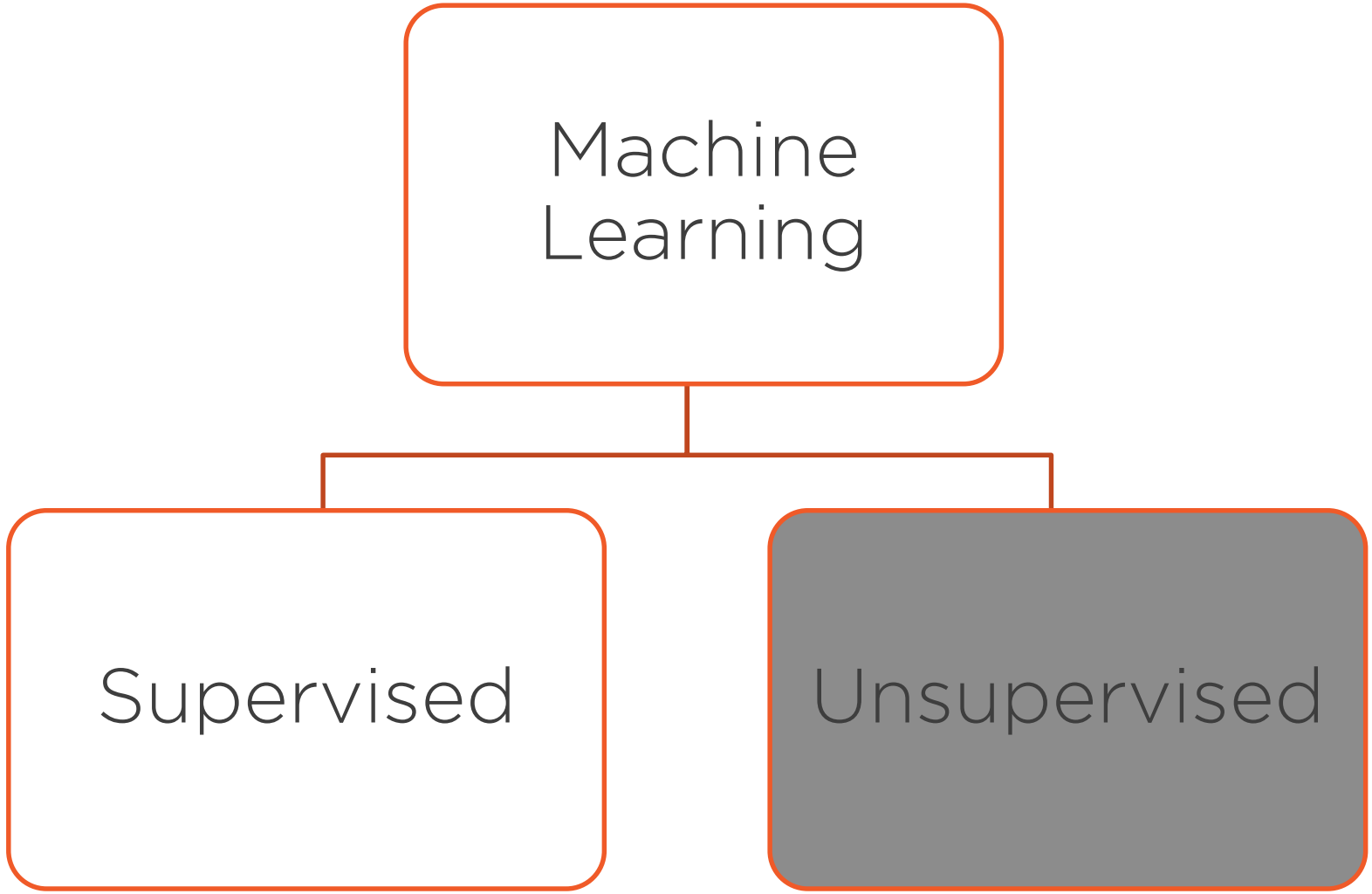
Data

Algorithm

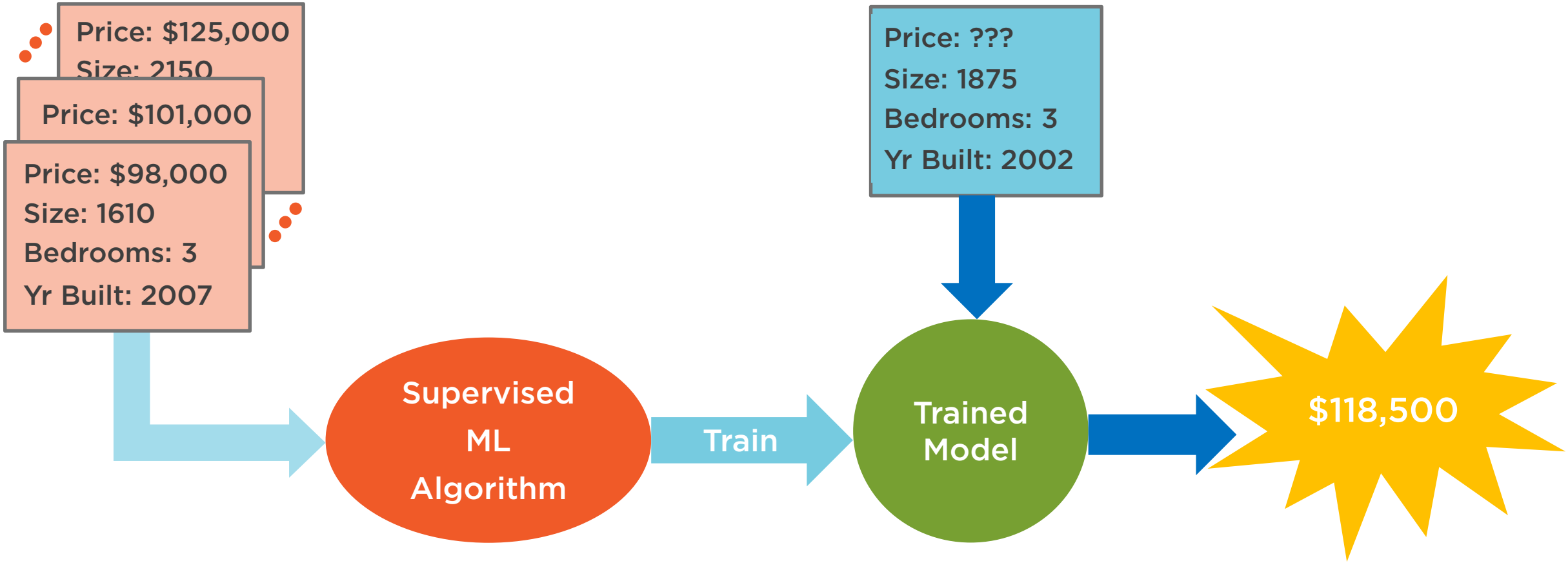
Data Analysis

Model

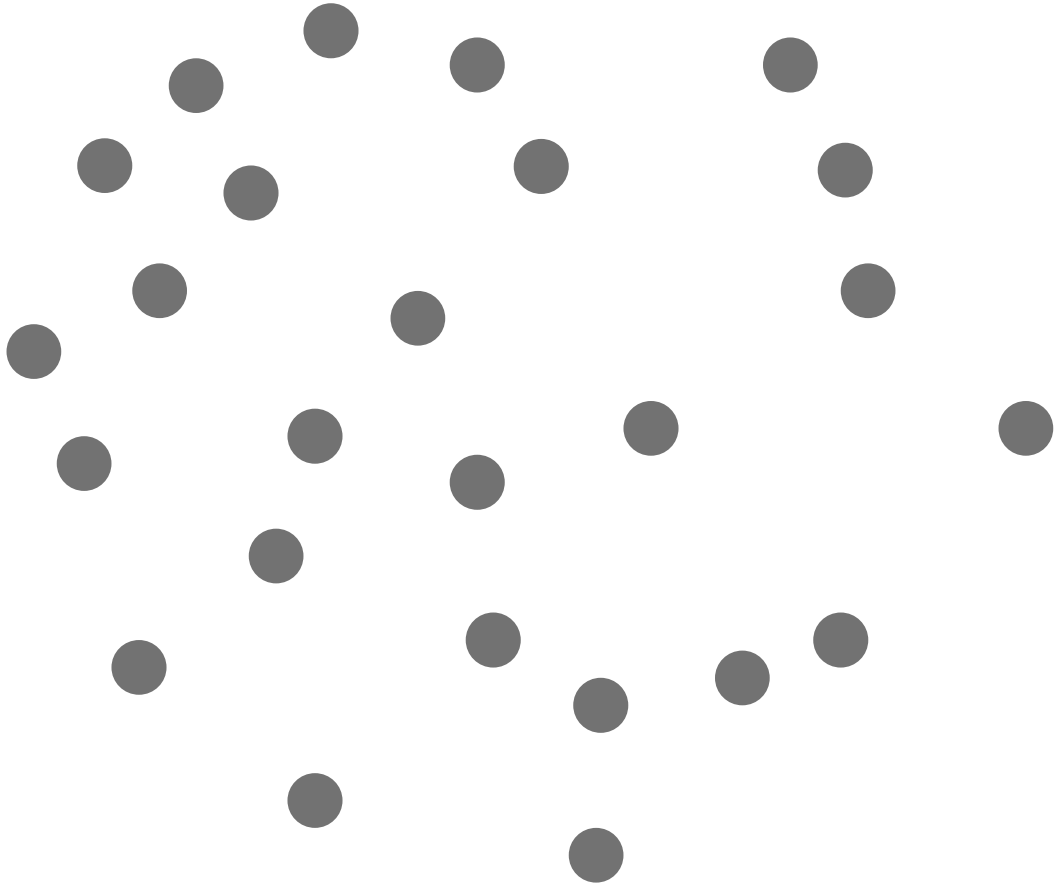

Machine Learning
Supervised
Unsupervised


Machine Learning
Supervised
Unsupervised

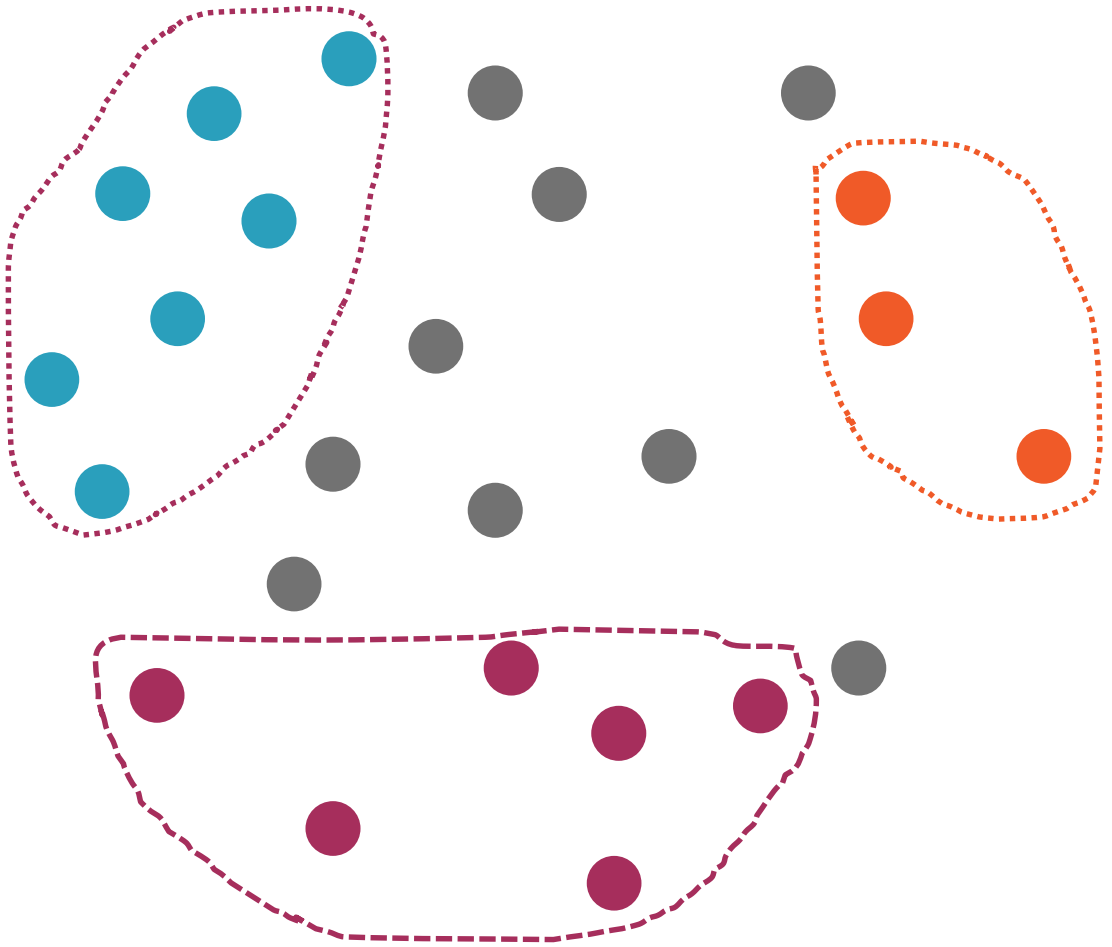
Supervised Machine Learning



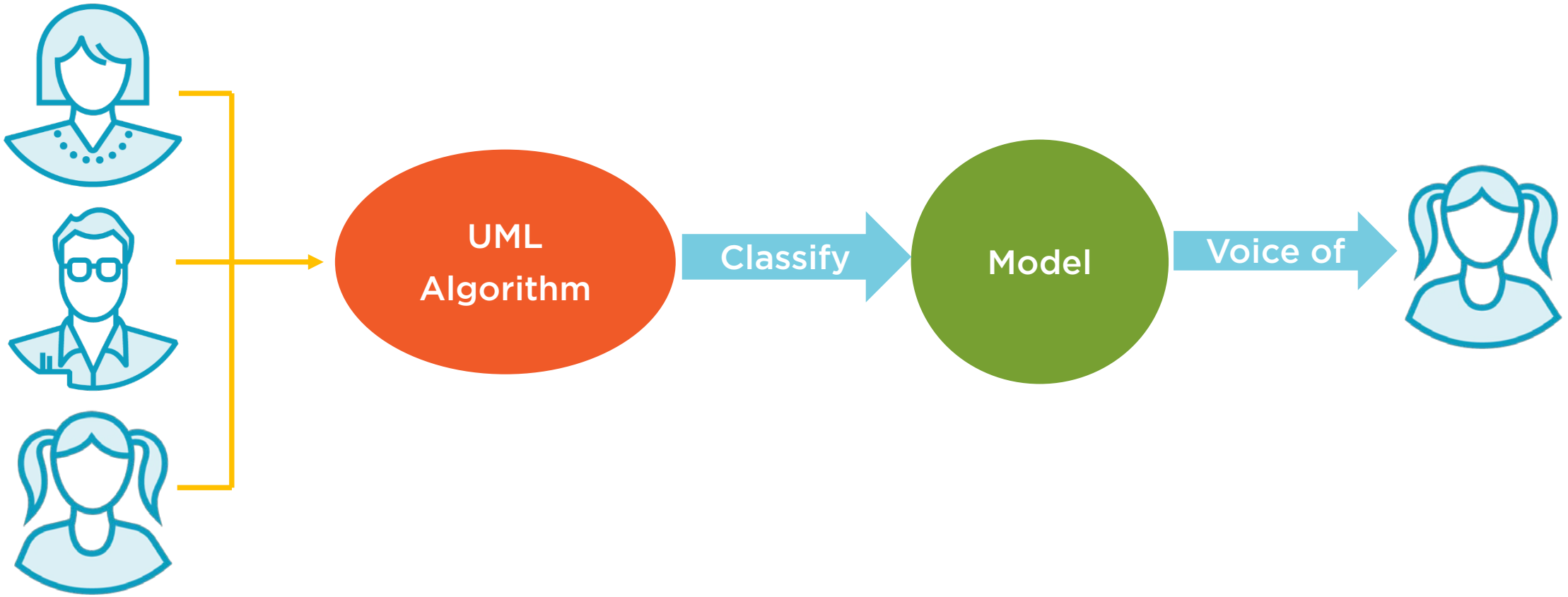
Unsupervised Machine Learning



Unsupervised Machine Learning



Unsupervised Machine Learning



Machine Learning Technique Comparison

Supervised	Unsupervised
Value prediction	Identify clusters of like data
Needs training data containing value being predicted	Data does not contain cluster membership
Trained model predicts value in new data	Model provides access to data by cluster
Subject of this course	Not in this course

Course Overview

Machine Learning Workflow

Applying the Workflow Steps

Summary

Your Skills

Not Required

Experience in R

Experience with R Studio

Advanced statistics or math

Required

Software development experience

Experience with data in tables

Basic math and statistics skills

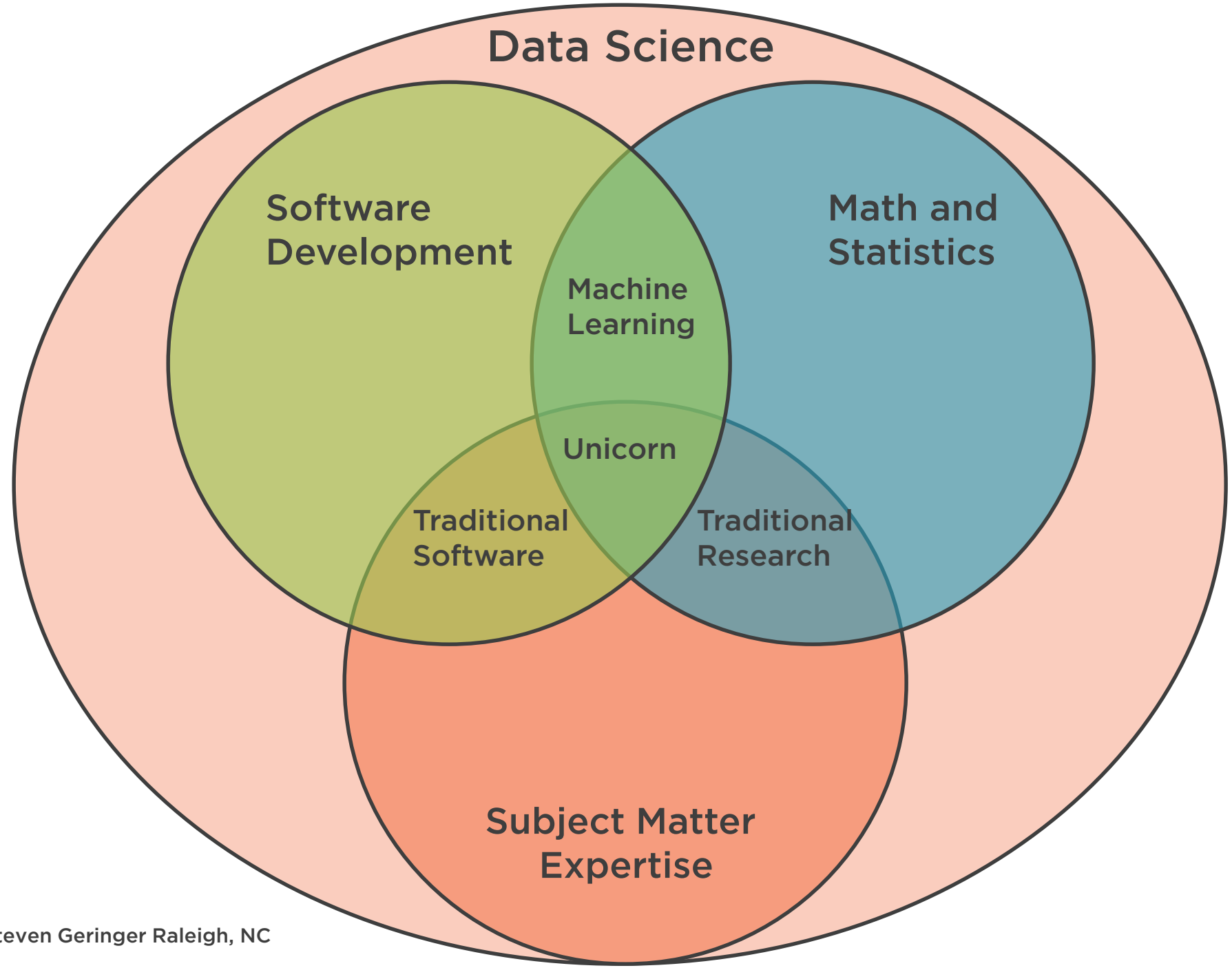
Passion to understand

Why This Course?

Add Machine Learning skills

Learn something new

Learn about Data Science

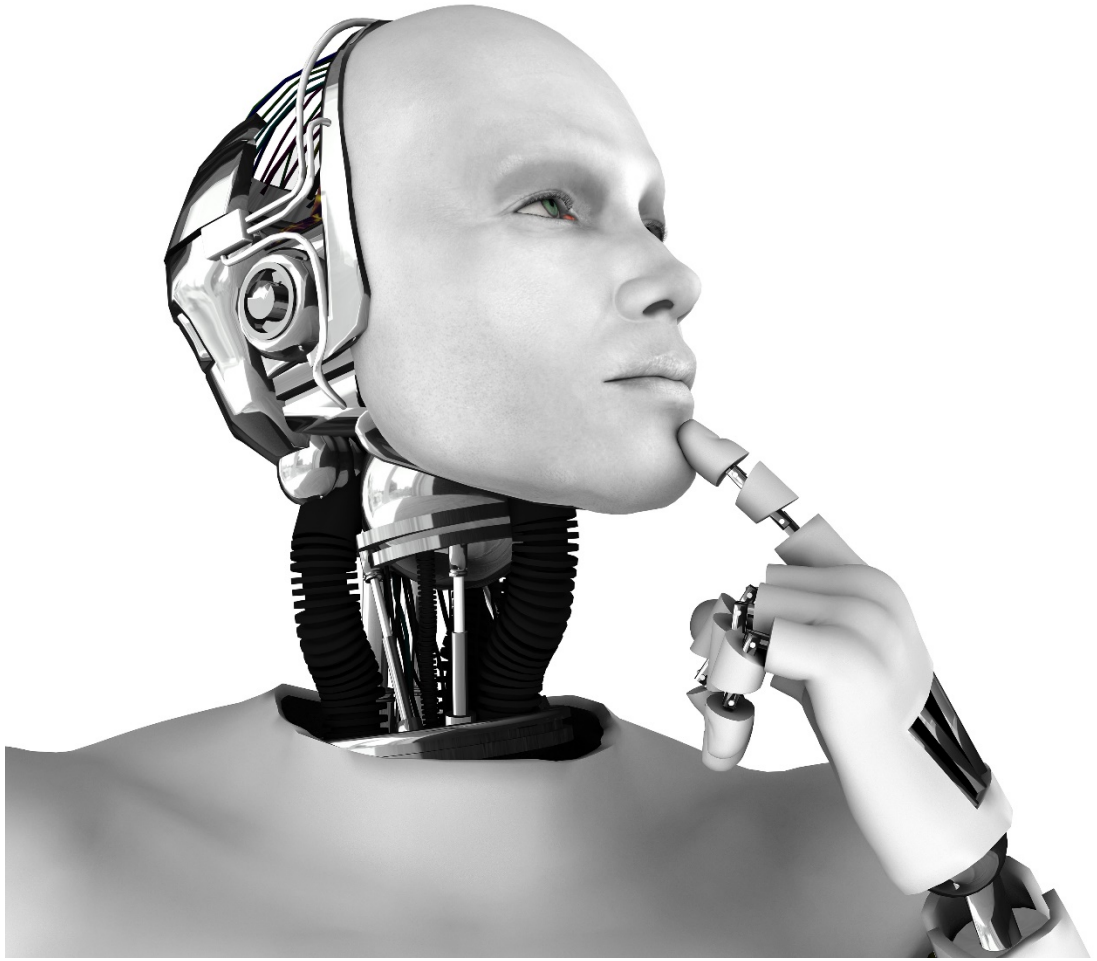


A company's success can be effected by Machine Learning

“Unicorn Data Scientists (upgraded from “sexy data scientists”) are hard to find and are paid more than $200,000 per year.”

Gil Press. (2015). *Forbes*

Your next project?



Let’s get started!