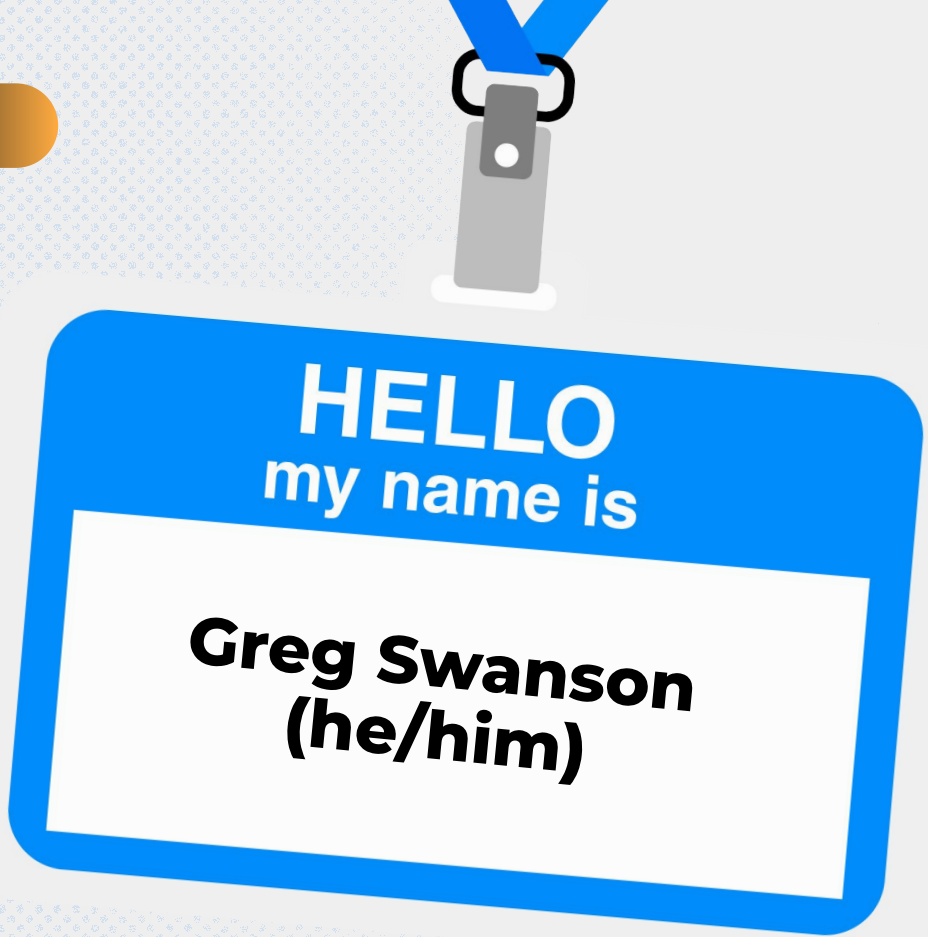

PLURALSIGHT

AI/ML Learning Spike

Welcome!

Greg Swanson
Instructor, Pluralsight



About Me:

- Lead Data Scientist for Storyblocks
- Teaching Programming and Data Science related topics for the last 5 years
- I live in Utah & love getting out in the Wasatch Mountains as much as I can

Prerequisites

This course assumes you

- No background knowledge is strictly necessary for this course, however the following will help students grasp the material significantly faster.
- Statistics 101 (metrics, forms of bias, hypothesis testing)
- Calculus (especially the derivative and the gradient)
- Experience programming, deploying, and monitoring software systems.

Why study this subject?

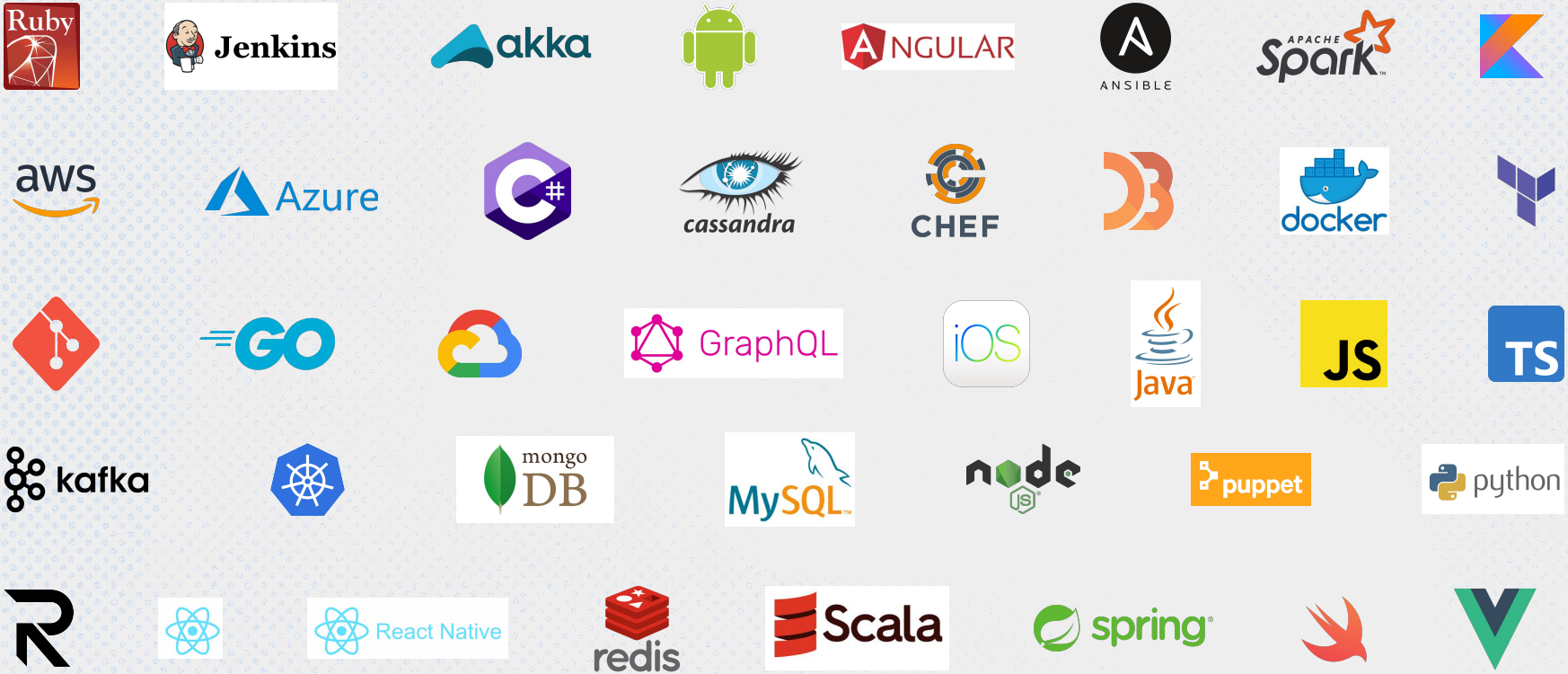
- Machine Learning is fast becoming the most popular form of Artificial Intelligence.
- This course is a conceptual overview of Machine Learning, how it's used, and what kind of work goes into building a Machine Learning product
- This course is high level and appropriate for anyone interested in machine learning.

Note!

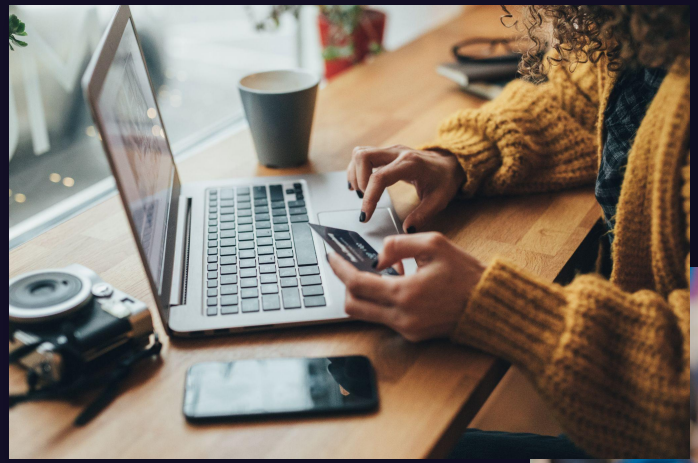
- **This course does include:**
  - High level discussion of Machine Learning topics.
  - Concrete examples of ML products and ML algorithms.

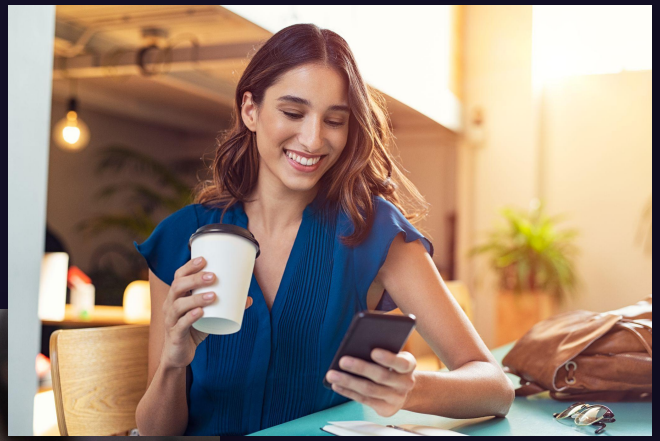
- **This course does NOT include:**
  - Low level implementation details of Machine Learning.
  - Programming exercises where students build ML models.

We teach over 400 technology topics.



You experience our impact on a daily basis!





My pledge to you:

I will..

- Make this course interactive
- Ask you questions
- Ensure everyone can speak
- Create an inclusive learning environment
- Use an on-screen timer for breaks

...also, if you have an accessibility need, please let me know!

Objectives

At the end of this course, you will be able to:

- Define “Machine Learning” and distinguish between ML and other forms of Artificial Intelligence.
- Distinguish between supervised, unsupervised learning
- Identify the different portions of the Machine Learning Product Lifecycle
- Identify likely causes of ML product failure.
- Describe the function and importance of training/validation/test data

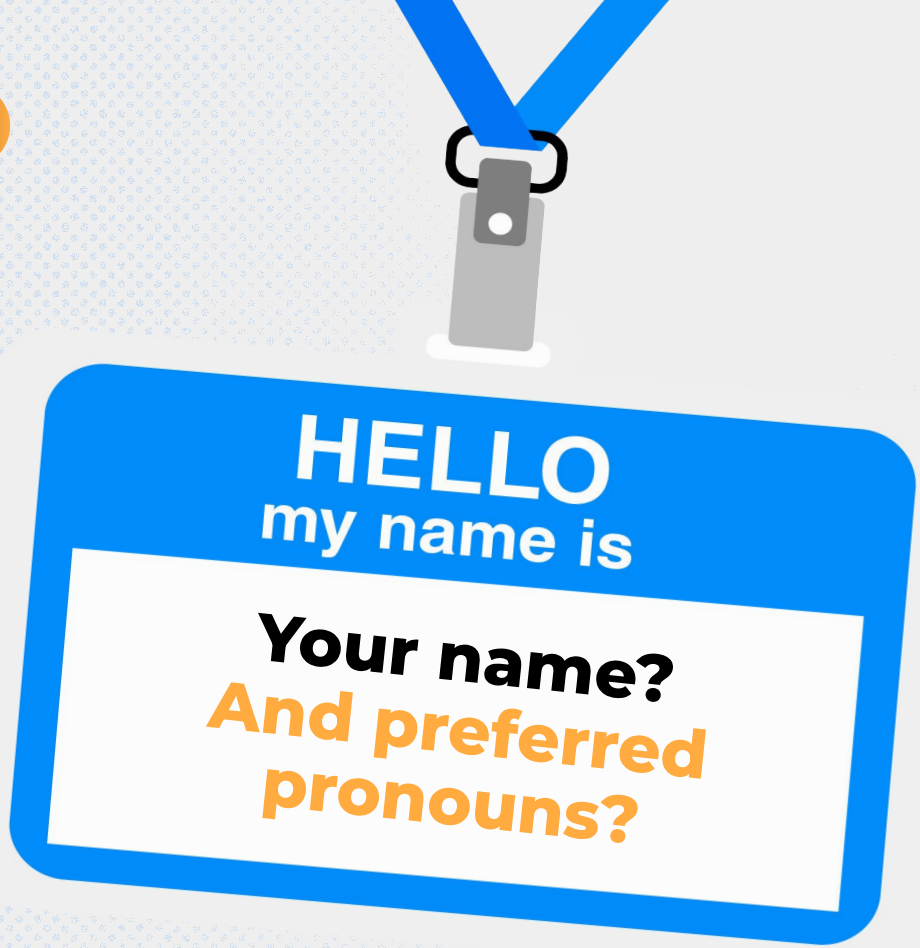
Agenda

- The Big Picture: What are AI, ML, and Data Science
- Small sampling of ML use cases.
- Prominent ML failures and some causes.
- Test data vs training data vs validation data.
- Cross validation
- The model training process
- Underfitting and overfitting



How we're going to work together

- You'll have a copy of all the course materials shortly
  - We'll be using Jupyter notebooks
- You'll be following along in the notebook



Student Instructions

- Job title?
- Where are you based?
- What is your related experience, if any?
- Fun fact?

Set up the environment

2 OPTIONS:

1. **Google Colab -** Download the folder here
2. **Local -** Clone the repo here

Thank you!

If you have any additional questions, please ask!If