Intro to Applied Data Science

MMCi Weekend 1

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Course Objectives

You might not be building models, but you'll use them. You should know:

1. What they can and can't do (*capabilities, limitations*)
2. When and how much to trust their predictions (*evaluation*)
3. What's inside the black box (*interpretation*, *understanding*)

Equip you to:

(a) design and manage data science research and/or QA/QI projects

(b) collaborate and communicate effectively with data scientists

(c) add rigor to model development and validation


ONE WAY
DO NOT
ENTER

Introductions!

your name

+ your role either just before MMCi or outside of MMCi

+ any other fact about yourself (e.g. a typical breakfast, last tv show you watched)

+ how you feel about the effects DS/ML/AI will have on health

  (excited, worried, both, something else)

Course Overview

We will learn about state-of-the-art data science techniques that have changed or will change clinical practice.

- How are these techniques different from what has come before?
- How are they the same?
- What do you need to know to use them effectively and responsibly?

I know that most of you are NOT going to be data scientists.

But you *will* work with data scientists, and you *will* have to make decisions about what models to use and how to use them. It is important to know enough to get in the weeds with the data scientists, because if applied/evaluated incorrectly, these models are certain to be unhelpful and *likely to be harmful*.

Course Logistics

- Let’s take a look at the course site (in Canvas)
- Questions & discussion about course requirements, materials, or activities
- Contact me: m.engelhard@duke.edu