If you would like to participate in a live poll today... open the camera app on your phone, scan the QR code,

or type PollEV.com/prediction, to get ready.



Radcliffe gratefully acknowledges the Melanie Mason and David W. Niemiec Fund for Science, which is supporting this event









Dr. Casandra Mangroo Vice President of Science, BenchSci Accelerating Preclinical R&D with Artificial Intelligence

Dr. Regina Barzilay

Distinguished Prof. of AI & Health, MIT

AI Algorithms

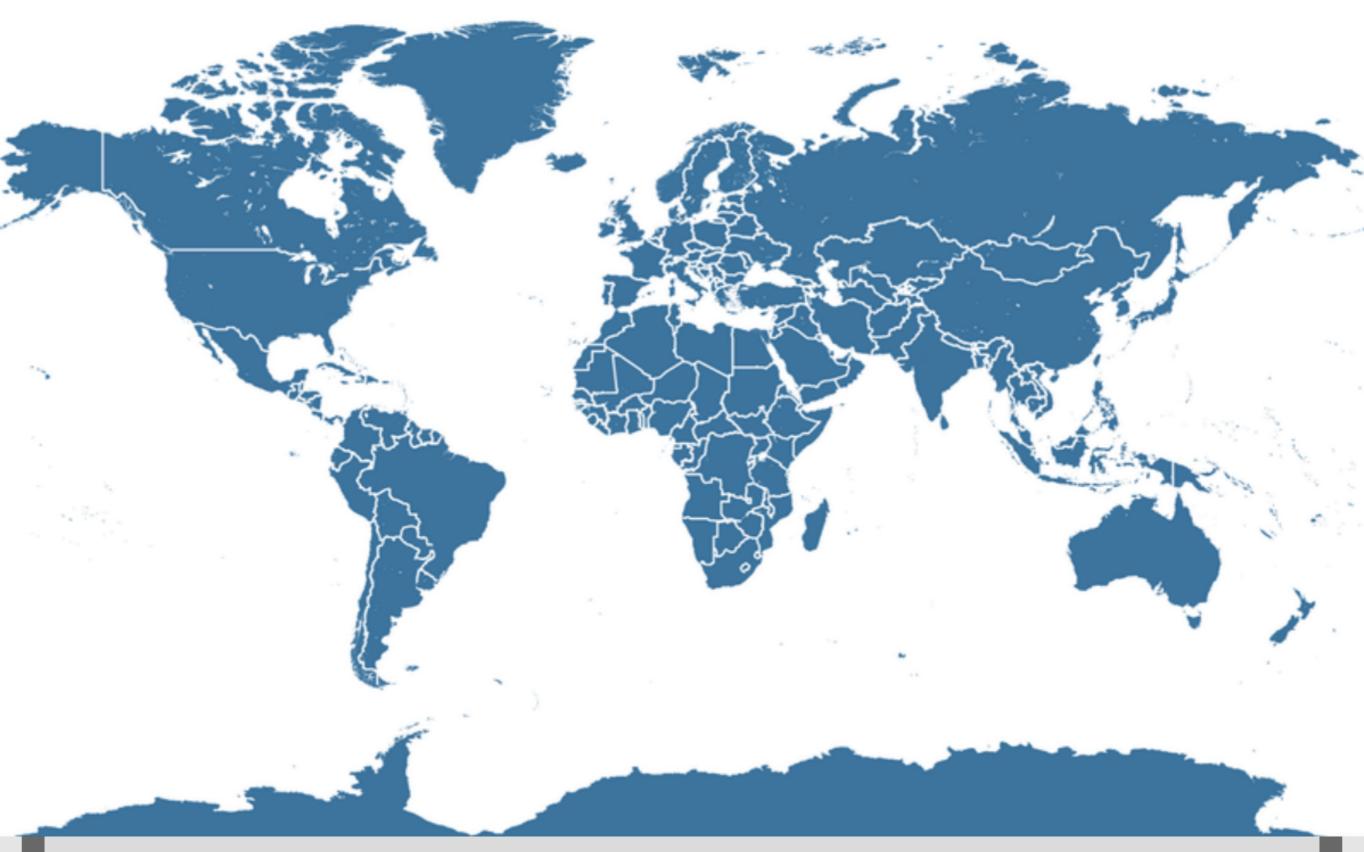
for Drug Discovery

Al and the Future of Health



Moderated by Dr. Alyssa Goodman R.W.Willson Prof. of Astronomy, Faculty co-Director for Science, Radcliffe

Where are you today?



Respond at **pollev.com/prediction**

☐ Text PREDICTION to 22333 once to join, then A, B, C, D, or E

You & AI

| Significant part of what I do for a living | A |
|---|---|
| Very familiar with AI, but not part of my work | В |
| Know about some aspects of AI, but not "expert" | C |
| Vaguely familiar with AI | D |
| No background in AI | E |

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When poll is active, respond at **pollev.com/prediction**Text **PREDICTION** to **22333** once to join

You & Health

My main line of work

Part of what I do

A significant interest for me, but not professionally

One of many interests, not paramount for me

When poll is active, respond at **pollev.com/prediction**Text **PREDICTION** to **22333** once to join

You & Health

My main line of work

Part of what I do

A significant interest for me, but not professionally

One of many interests, not paramount for me

When poll is active, respond at **pollev.com/prediction**Text **PREDICTION** to **22333** once to join

You & Health

My main line of work

Part of what I do

A significant interest for me, but not professionally

One of many interests, not paramount for me

What's different about "AI"?

20th century

| henomenon Observation | Data | Rule | Theory | Explanation | Prediction |
|-----------------------|------|------|--------|-------------|------------|
|-----------------------|------|------|--------|-------------|------------|

21st century?

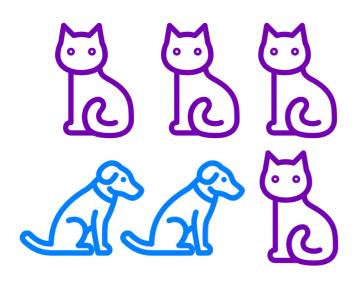
| Phenomenon O | bservation | Data | Al/"machine learning" | Prediction |
|--------------|------------|------|-----------------------|------------|
|--------------|------------|------|-----------------------|------------|



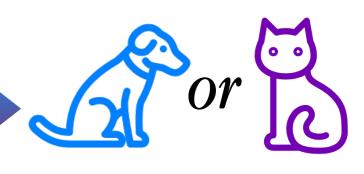
What's "machine learning"?

"training" data learning algorithm

"predicted" answer



PREDICTIVE SYSTEM



sufficient? unbiased?

supervised? unsupervised? uncertainty?
bias?









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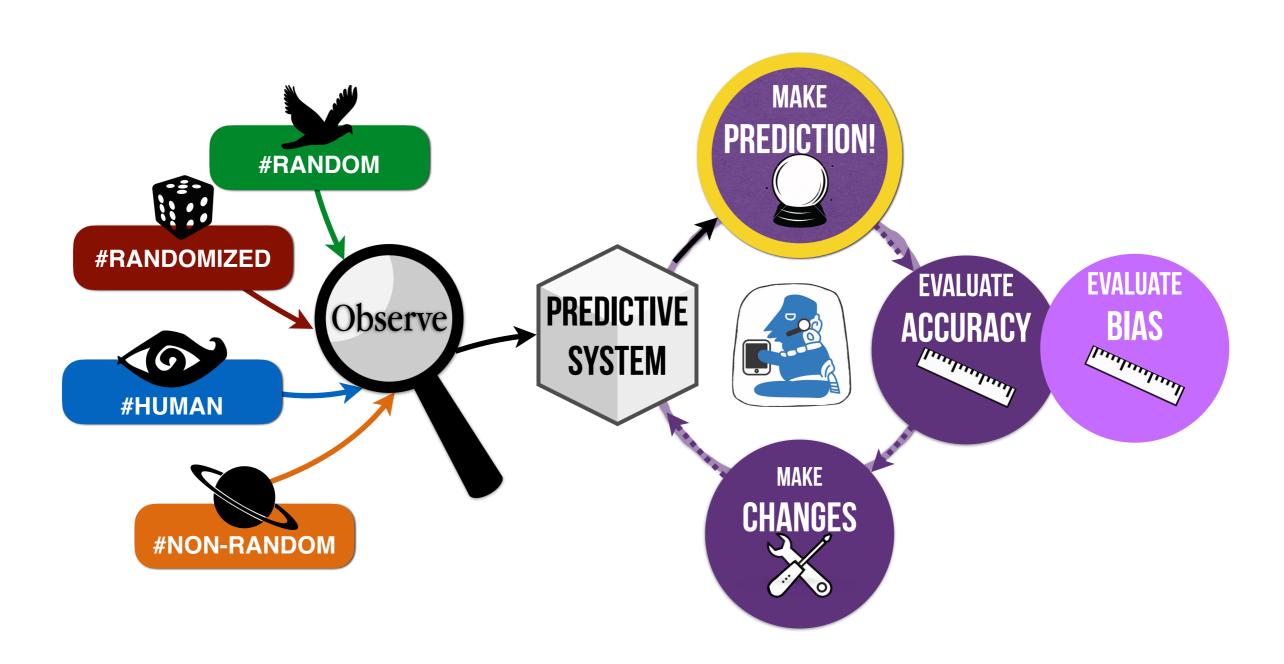
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A Modern Framework for Predictive Systems





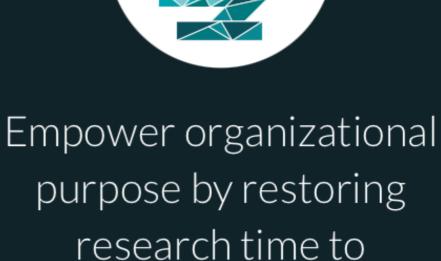
Questions in Modeling Property Prediction

Representation Capacity

Low Resource Training

Mechanism Understanding

Uncertainty Estimation



Credit: BenchSci website

scientists

Credit: R. Barzilay

To keep the conversation going...visit the AI "Forum" at PredictionX.org

