EAB

Unlock the Potential of Predictive Modeling with Rapid Insight

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EAB Experiences
RAPID INSIGHT

Meet Your Presenters

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Submit a Question or Comment

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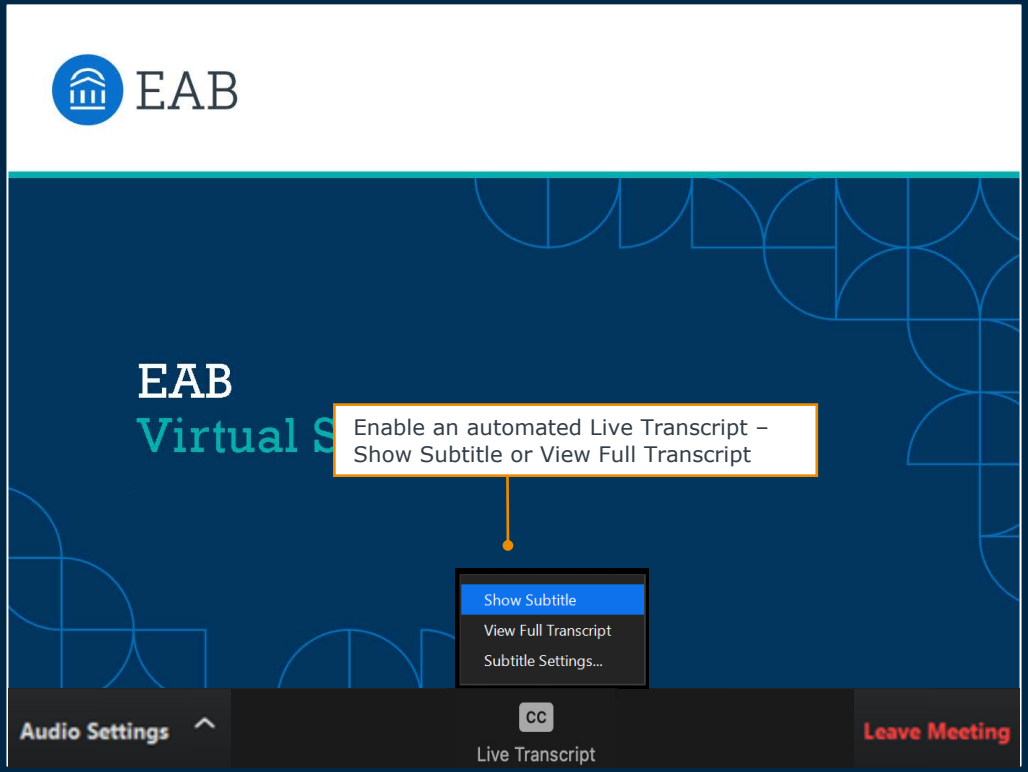
Turn on Captions



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Give the Chat a Try!

This or That?

Inside in the
air conditioning

Outside in the
summer sunshine

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Poll

Which of these steps are you already doing?

a) Collecting data
b) Organizing data
c) Cleaning data
d) Creating new variables in your data

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Predictive modeling isn't just for statisticians!

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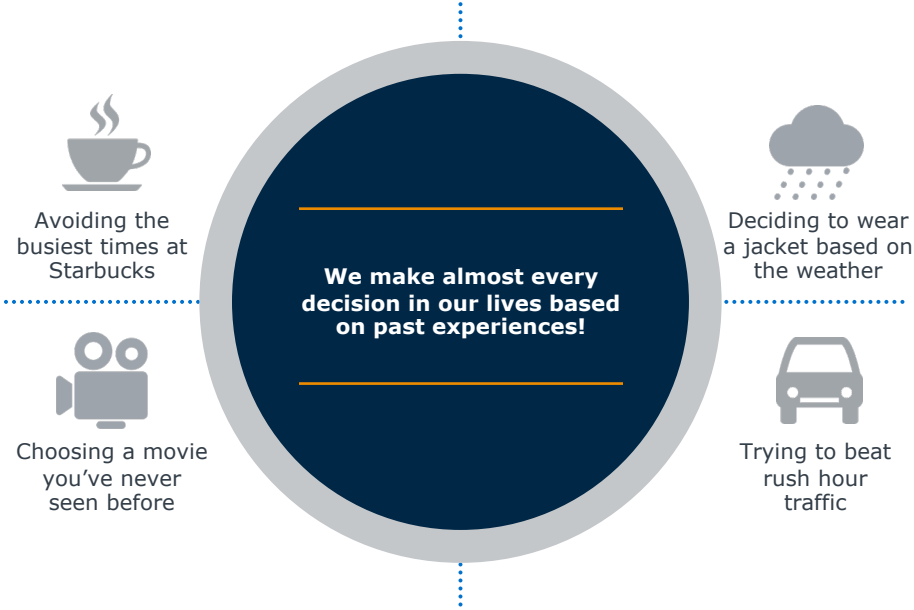
Demystifying Predictive Modeling

What is Predictive Modeling?

It's as simple as looking at data and comparing against past events.



Having a hunch or hypothesis and finding correlations *is* predictive modeling!

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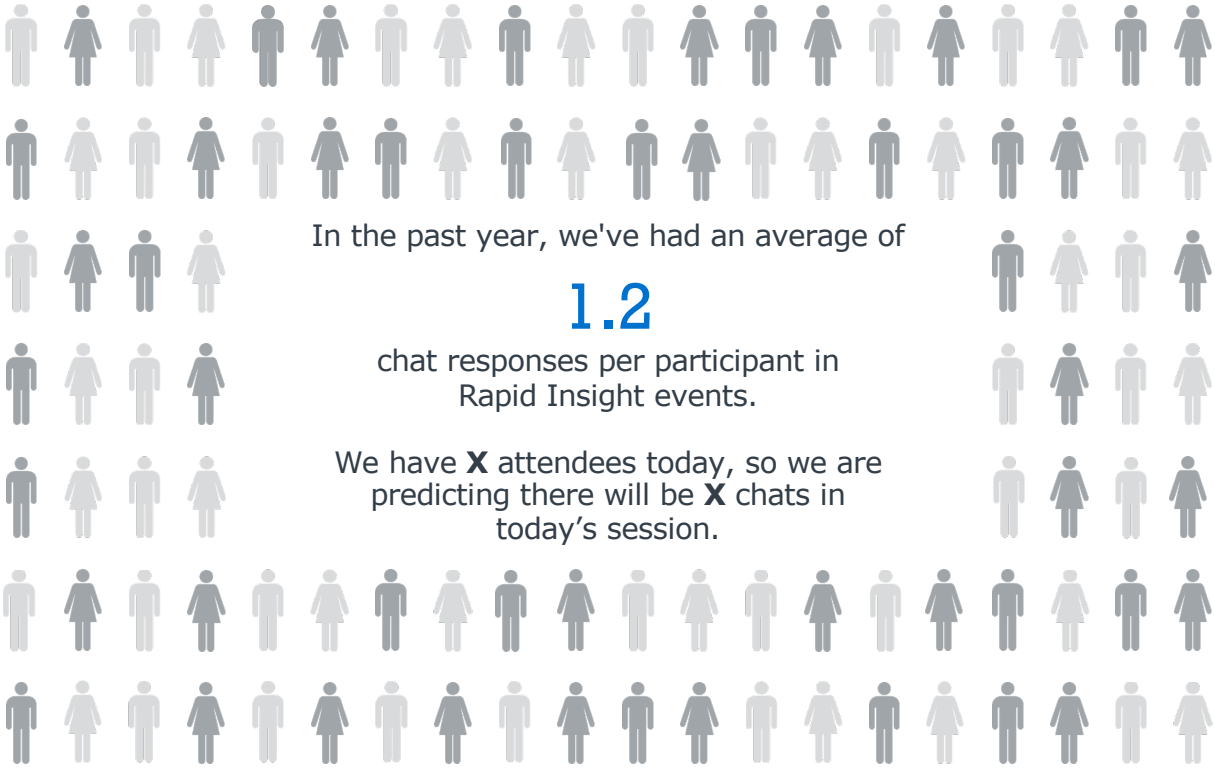
Predictive Modeling in Practice



In the past year, we've had an average of

1.2

chat responses per participant in Rapid Insight events.

We have **X** attendees today, so we are predicting there will be **X** chats in today's session.

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Why Use Predictive Modeling?

Why should you use predictive modeling?

- Because you already are!
- Most people stumble at predictive modeling by not getting started
- You probably already have the steps in place to get started

How can you use predictive modeling?

- Prospect-to-Inquiry
- Inquiry-to-Apply
- Admit-to-Enroll
- Financial Aid
- Student Support
- Retention
- GPA
- On-Time Completion
- Retention
- Advancement
- Any binary or real number outcome

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You’re closer than you may think

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Six Steps to Predictive Modeling

Steps You're Probably Already Doing

1

Collect data relevant to your target of analysis

2

Organize data into a single data set

3

Clean your data to avoid a misleading model

4

Create new, useful variables to understand your records

Steps You May Still Need to Tackle

5

Choose a methodology/algorithm

6

Build the model

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1. Collect data relevant to your target of analysis

Data collection often happens without us even thinking about it.

Student registration patterns are collected automatically when a student registers

Application data is captured within the system used by Admissions during admissions season

Fringe data or data from new systems like mobile apps and event registration platforms

Challenge

The data may not be easily accessible. Local IT resources might gate your student database, or it could be hosted on a remote, secure server by the vendor.

Solution

Barriers can sometimes be alleviated through **partnerships**, **proof-of-concept projects, or technological solutions.**

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2. Organize data into a single data set

Your Data Now

- You're likely already merging these tables for reporting and ad-hoc queries, meaning you're probably already doing much of this work.
- Student information systems and data warehouses, like EAB's Edify, often store related data in the same or just a few tables.

Challenge

Organizing vast amounts of disparate data can be complex and time-consuming.

Solution

- Focus on a core set of variables for initial passes.
- Then if time allows, adding supplemental fields can be very beneficial.
- You may be surprised by how much a model can reveal using just basic information from your systems.

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3. Clean your data to avoid a misleading model

Challenges

- Data preparation can be 80% of the work in a modeling project
- Predictive modeling often requires exploring new fields that aren't part of existing cleaning processes.
- Hypotheses about predictors, like digital and campus transaction data, might require additional cleaning and formatting.

Solutions

- Your institution (or you!) are likely cleaning some data already
- Fields included in reports and dashboards are probably in good shape, with no missing values or incorrect labels.
- Databases generally have "Constraints" on fields, such as student IDs that cannot be null, predefined sets of values for inputs (like "Major")

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4. Create new, useful variables to understand data

Institutions often create new variables for reporting, which can be used in predictive models.

Challenge

You aren't sure what variables to create.

Solution

Creating new variables can be a fun and creative process, asking "What else might help us understand this outcome?"
(If you don't have time for this step initially, you can still build a model and revisit it in future iterations.)

You create **a flag for students taking a required lab-science course.**

→

You use this data to **avoid capacity bottlenecks** in the lab science course.

→

Such flags can be useful in predictive models for **retention or on-time completion.**

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What now?

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Steps You May Not Already Be Doing

Choose a methodology

- Reach out to colleagues and leadership to find out if they already engage with a predictive modeling solution.
- Contact your EAB Strategic Leader to see if they have recommendations for your predictive modeling project.

Build the model

- Use Excel to build a basic regression model.
- Use Predict or another statistical package—reach out to Rapid Insight Support to get started with Predict.

Next Steps

We're hoping everyone will leave this session with at least one point of curiosity they can chase down or add to their Summer project list.

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Live Demo

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Poll

Do you feel more confident now to explore predictive modeling?

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Join Us for Our Institutional Reporting Series!

Steps to Build, Use, and Evaluate Your Model

Accreditation Reporting

Learn how to align data analysis jobs with your institution's accreditation requirements like:

- Merging/appending tables where needed
- Performing known cleanup tasks
- Creating useful new variables

JULY 11

Ad Hoc Reporting

Manage ad hoc requests outside annual compliance reporting more efficiently by:

- Using metadata to get a sense for the dataset itself
- Reviewing correlations between characteristics and outcomes

NOVEMBER 7

Catch Up: IPEDS Reporting

Watch the recording from our first Institutional Reporting session, where we covered 3 key areas essential for Rapid Insight users responsible for annual IPEDS reporting:

- Fixed width formatting
- Transposing data
- Creating flags for key demographics

Watch the recording

Register for the sessions here!

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Closing Polls

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What was your biggest takeaway from today's session?

How was today's session?

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