Fulfilling the Promise of AI – Real Strategies to Drive Personalization and Value

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June 16, 2021

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Othot's advanced analytics guide colleges and universities to make informed decisions throughout the entire student-to-alumni lifecycle by understanding each individual better.

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Topics

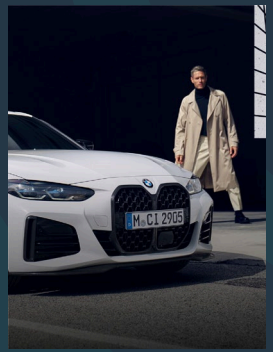
- Overview of AI, ML, and Advanced Analytics
- Data Before Analytics but Most Importantly, Insights
- ML in Action – University Advancement
- Wrap Up – What You Can Do “Back Home”

Overview of AI, ML, and Advanced Analytics

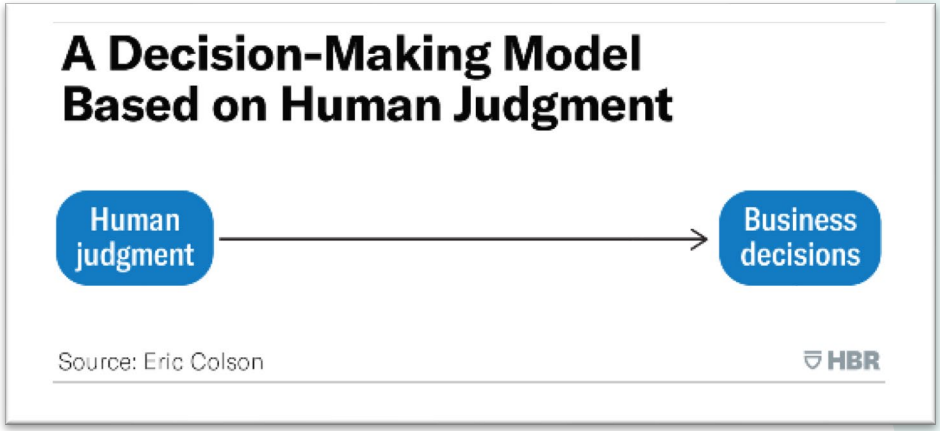
Patterns of Behavior Repeat

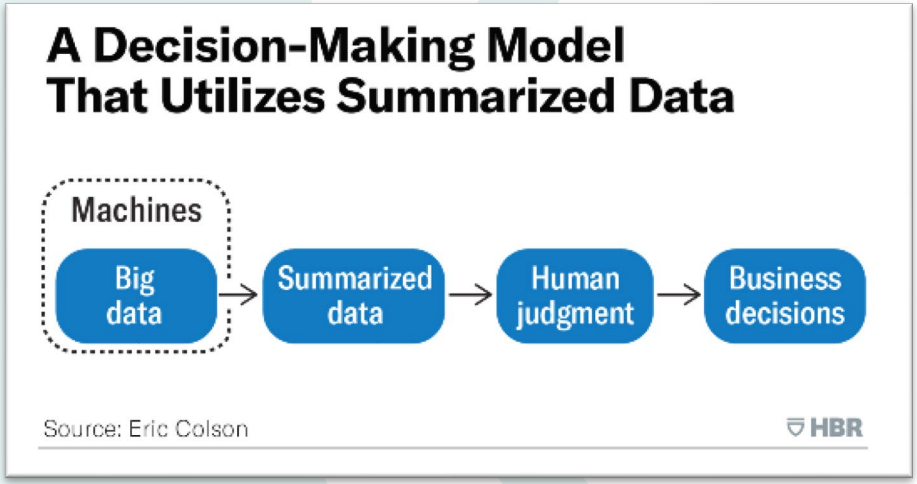
We are always trying to predict

We can change a person's likelihood



Using AI/ML IS About Better Decision Making





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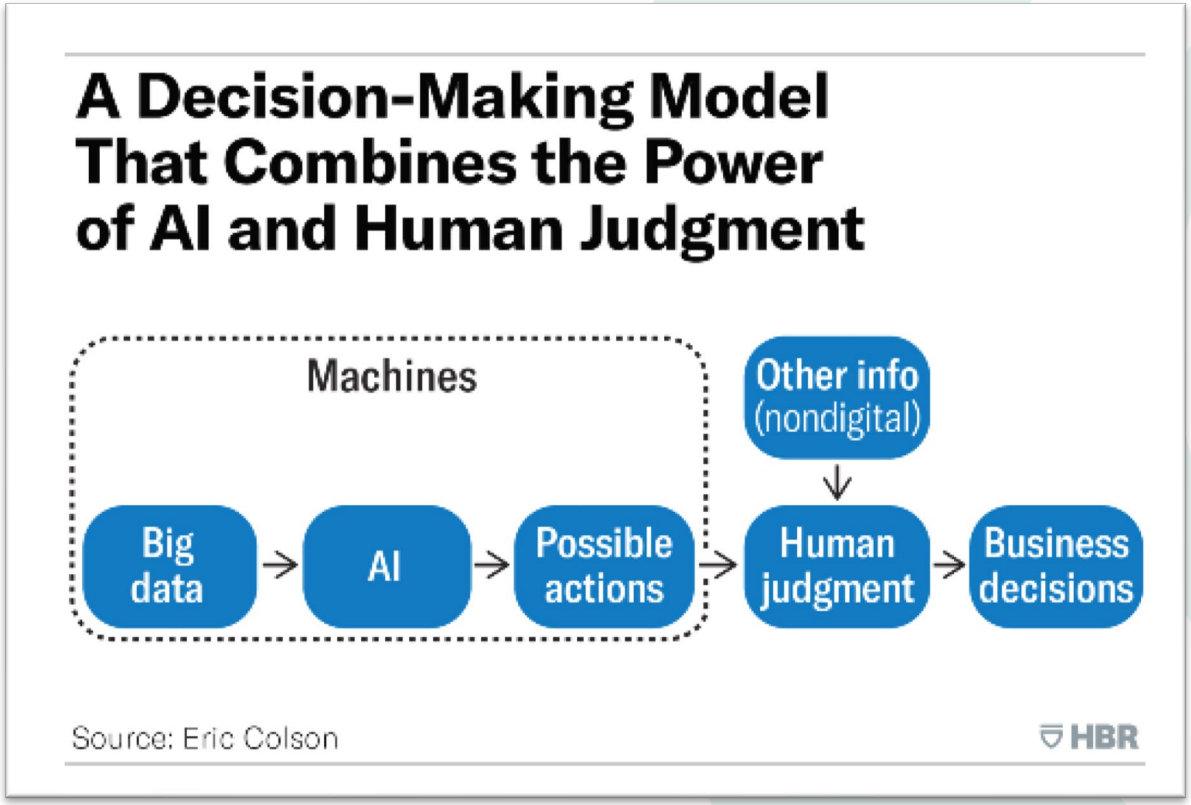
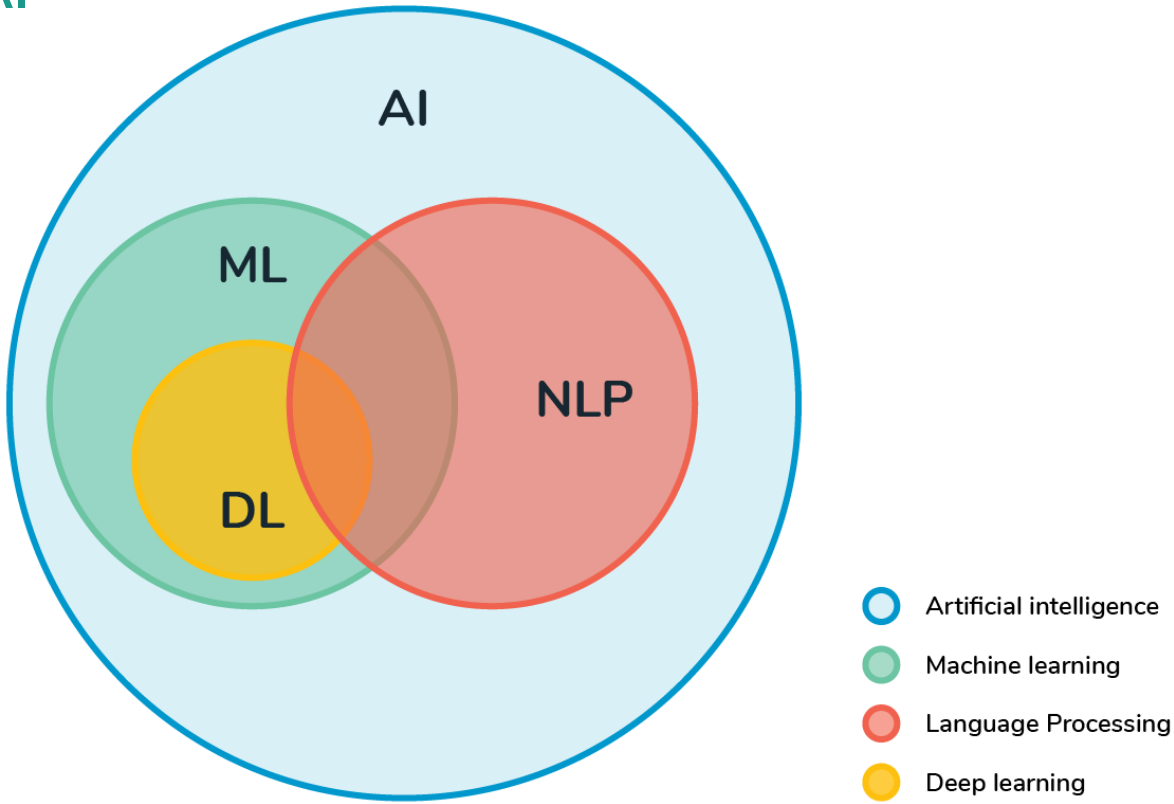
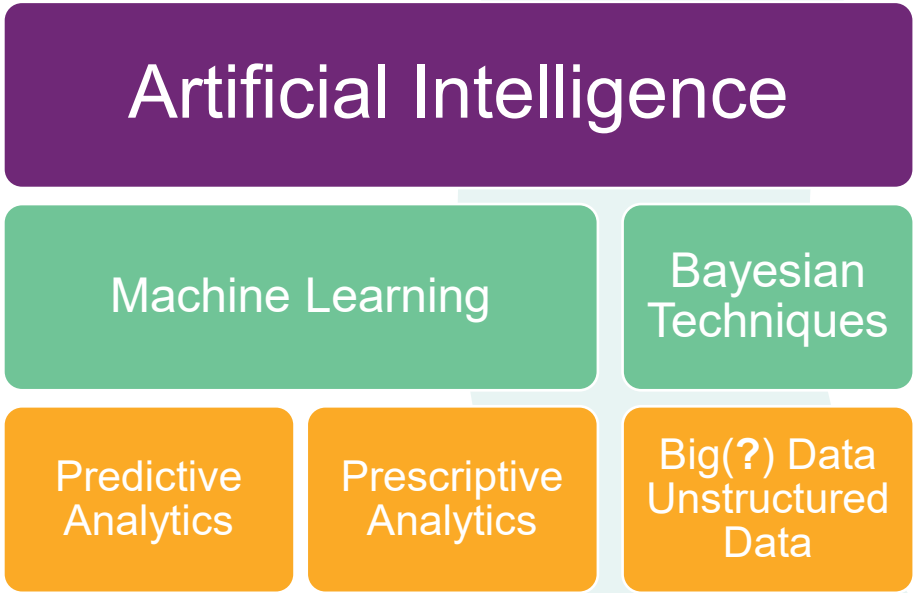


An “Aerial View” of AI

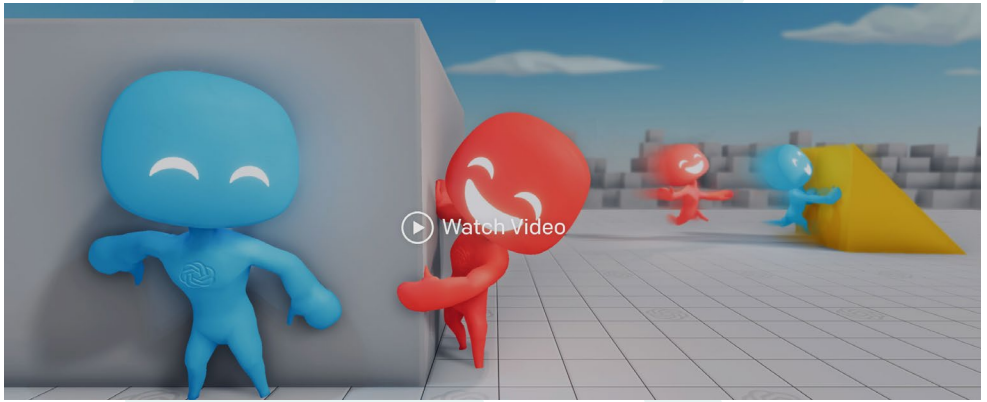


Digging a Little Deeper



Machine Learning and Multi-Agent Interaction

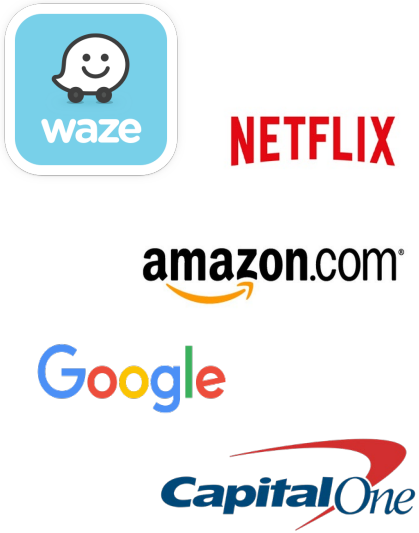
Deep Mind: Atari

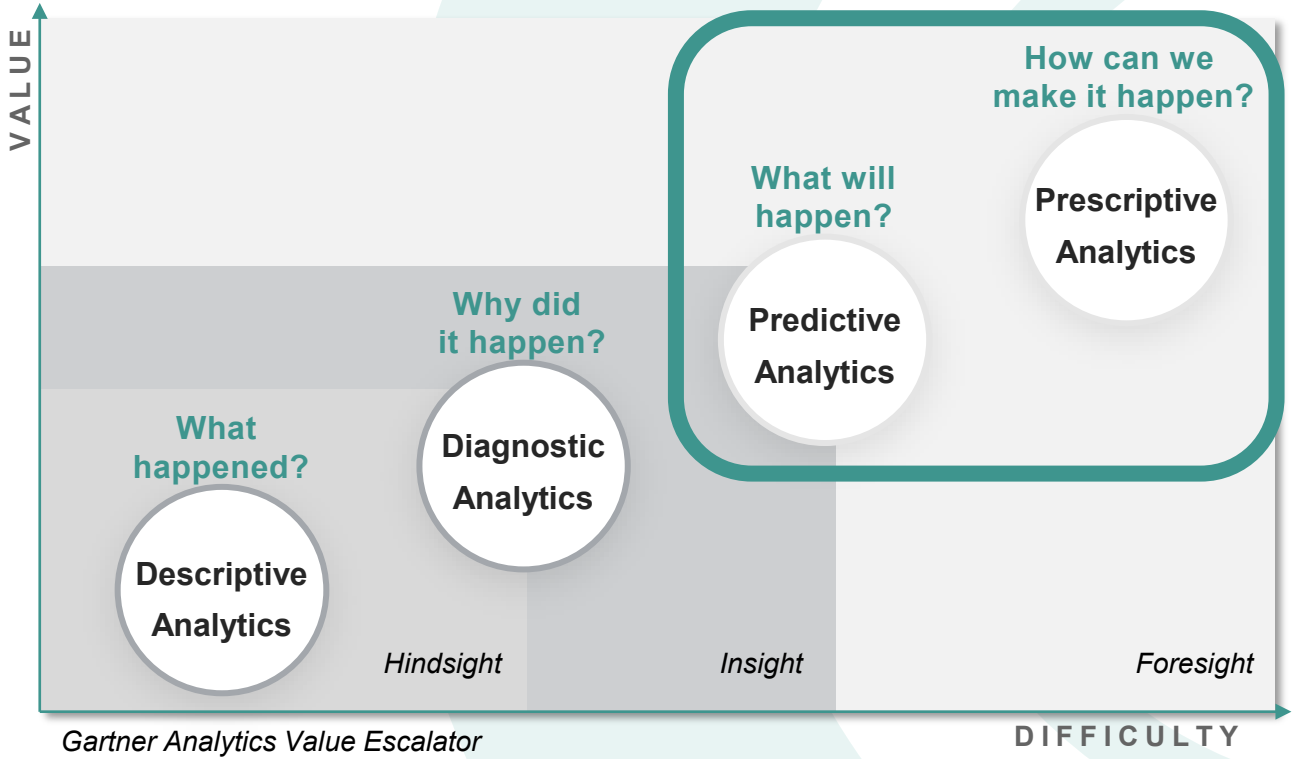


https://openai.com/blog/emergent-tool-use/

The Root of Near-Term Success

Commercial Leaders:

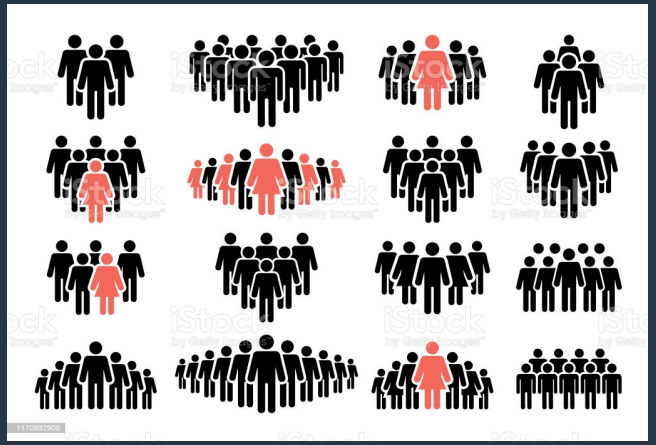




Gartner Analytics Value Escalator
www.gartner.com

Learn

Predict Behavior



20% Likely

Prescribe

80% Likely

HIQ

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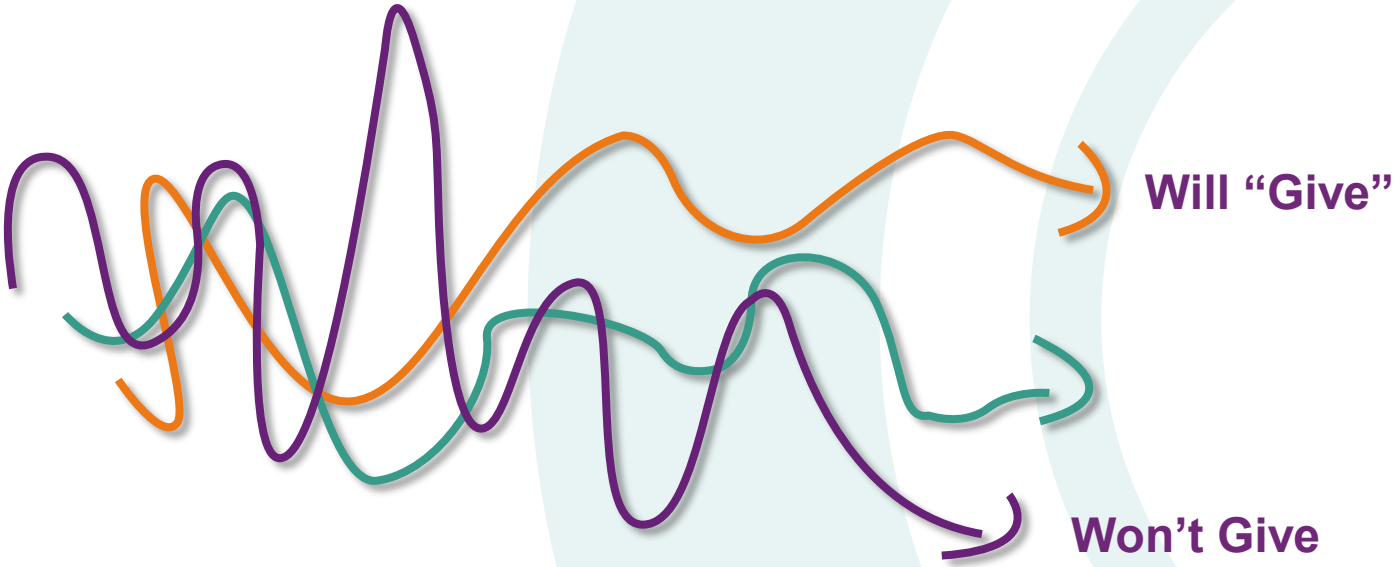
Data and analytics reveal the path to insights

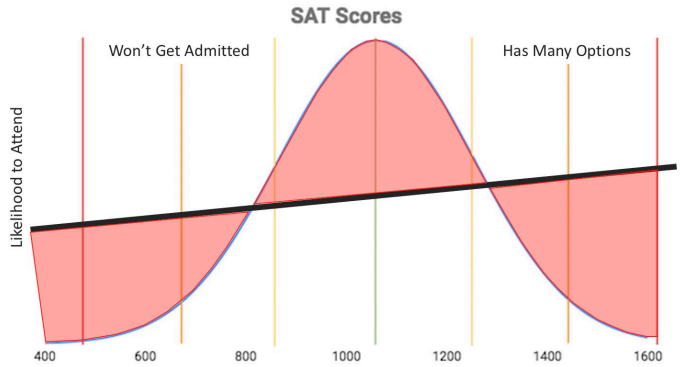


The Individual Replaces the Persona

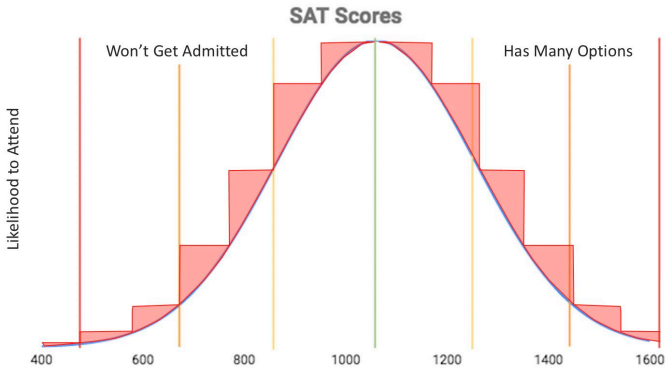
Everyone is Unique So We Need **Non-Linear Thinking**

Linear regression cannot capture this interaction between variables **– but machine learning can**

Linear



Nonlinear



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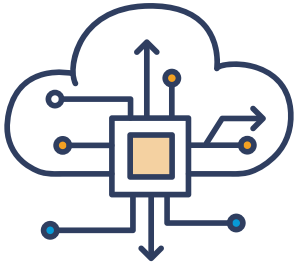
Data Before Analytics but Most Importantly, Insights

What are the Key Building Blocks for Success?

1

Leadership

2



Flexible & Dynamic IT Architectures

3

Data Mastery

4

Product Thinking Applied to Analytics

5

Innovation-Oriented Cultures

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Content: International Institute for Analytics

How Should We Think About Data?

What data?

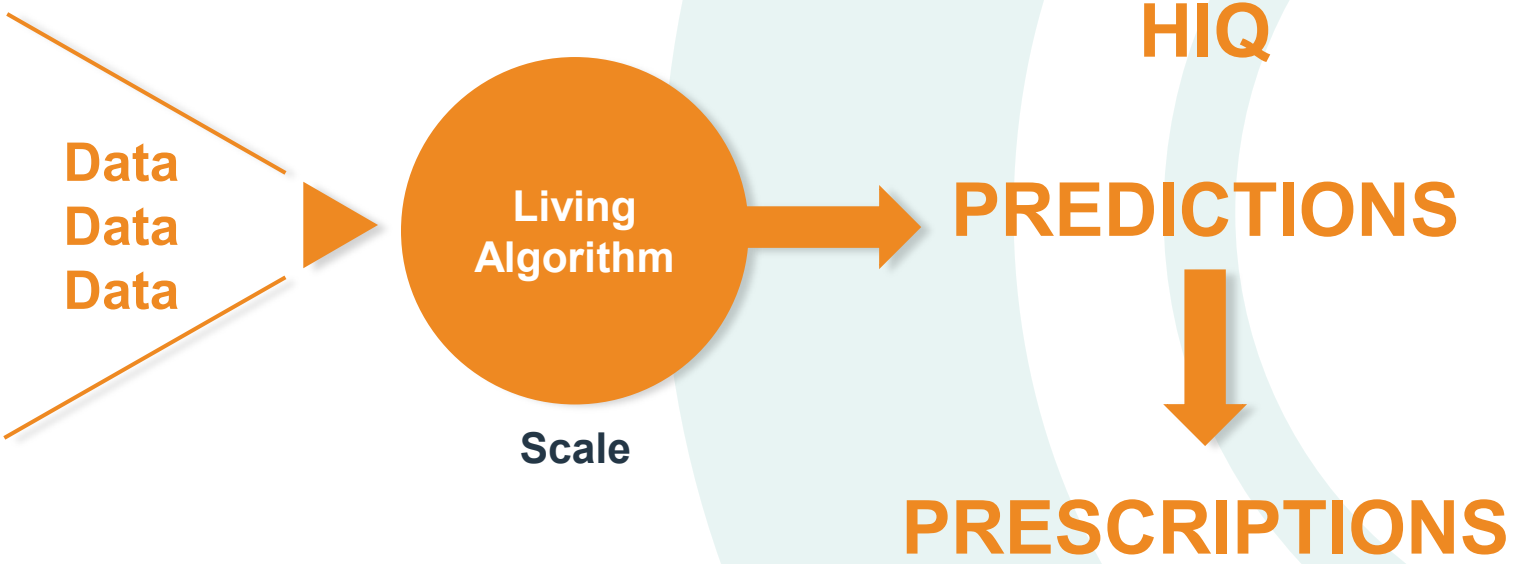
a. Descriptive
b. Behavioral (leads to prescriptive)

What's important?

a. Money
b. Status
c. Relationship
d. Excitement (marketing)

A Simple Model

Objective: Personalized Actions that Drive Behavior



HIQ's Are The Trees

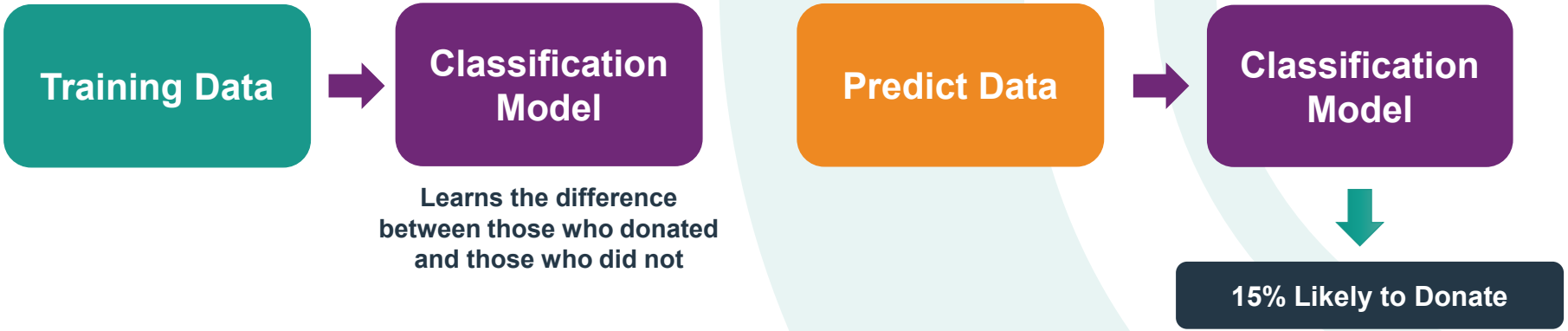
What is the likelihood that the ultimate objective will occur?

Insights are the Fruit

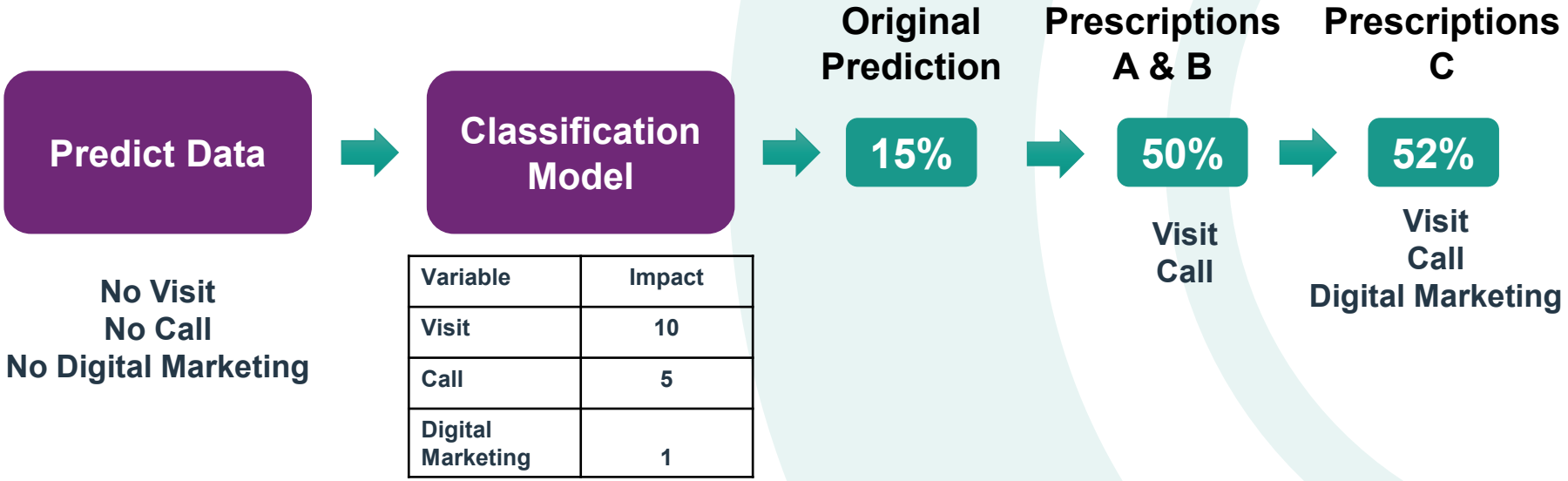
- **How to prioritize resources**
- **What future actions are most impactful?**
- **What are the tactics to the strategy**

Example: How Predictive Modeling Using Machine Learning Works

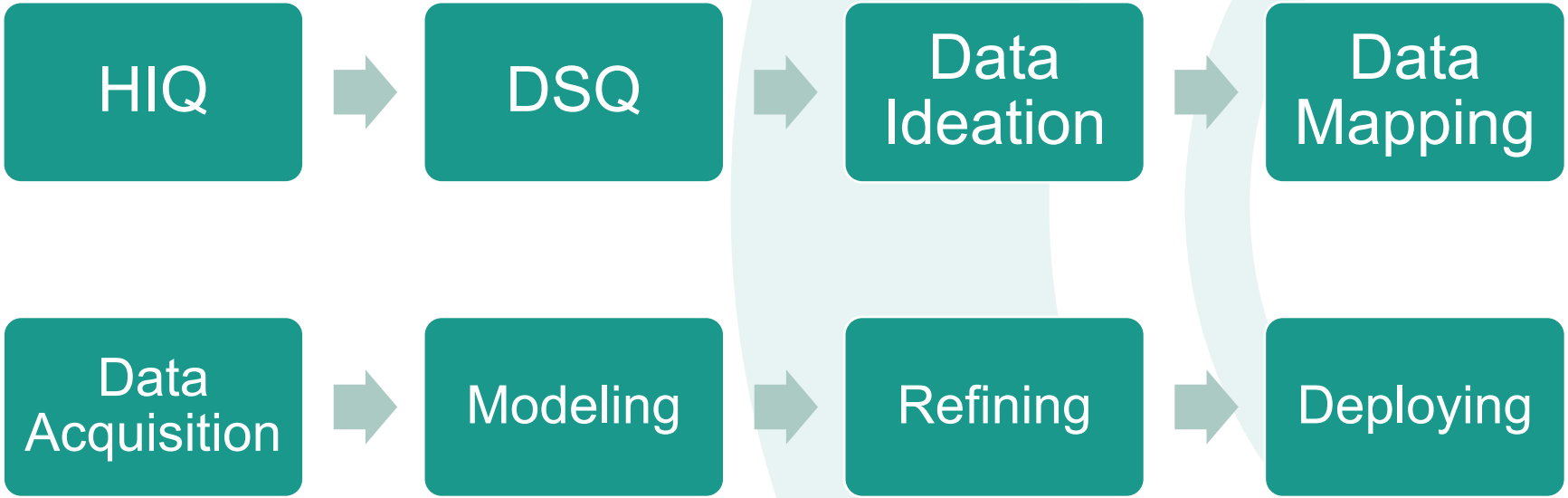
HIQ: What is the likelihood that a alumni will donate?



Non-Linear Modeling at Work



The Engineered, Advanced Analytics Process to Insights



An Othot Inc. developed process

ML In Action – University Advancement

“WHAT IS THE LIKELIHOOD OF AN ALUM TO DONATE?”

“What is the likelihood that an ALUM who GRADUATED between 1959 and 2009 will DONATE at least $1,000 to the XYZ FUND in the current fiscal year?”

Two distinct models predict the likelihood that an individual who graduated between 1959 and 2009 will donate

- Give at least $1000
- To a target fund
- During the next fiscal year
- For two populations separately:
  - **3 Year Lapsed & Non-Donors**
  - **Recent Donors**

Models for Two Populations Allow Us to Better Understand Individual Behavior

3 Year Lapsed and Non-Donors

- **Included: demographic, geographic, co-curricular, alumni association and behavioral data**

Top Importances

Alumi Association Status	42%
Gift Capacity Estimate	12%
Yrs Since Joining Alum. Assoc.	6%
Alumni Association Type	4%
Yrs Since Last Degr.	4%
Current Age	4%
Field of Work	2%
Most Common Income Bracket	2%
Graduate Degree Level	2%
Distance	2%

Recent Donors

- **Include: demographic, geographic, co-curricular, alumni association, and behavioral data as well as donation history data**

Top Importances

Sum Annual Giving Gifts: Previous FY	66%
Sum Any Gifts: Two FY Ago	6%
Sum Any Gifts: Three FY Ago	3%
Avg Amt Any Gifts: Previous FY	2%
Distance	1%
Sum Student Fund Gifts: Cumulative 3 Years	1%
Count Annual Giving Gifts: Cumulative 3 Years	1%
Median Age	<1%
Usual Hours/Week Worked	<1%
Sum Non Annual Giving Gifts: Two FY Ago	<1%

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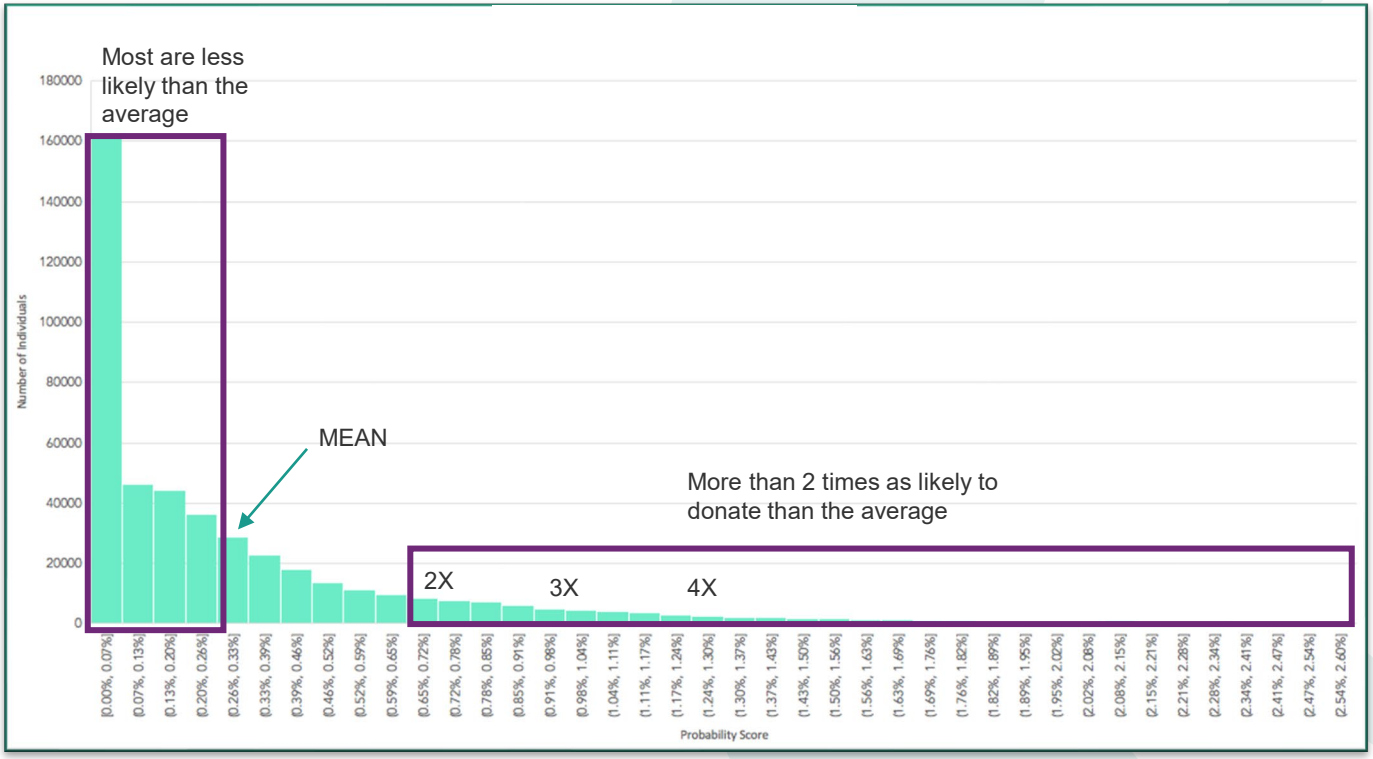
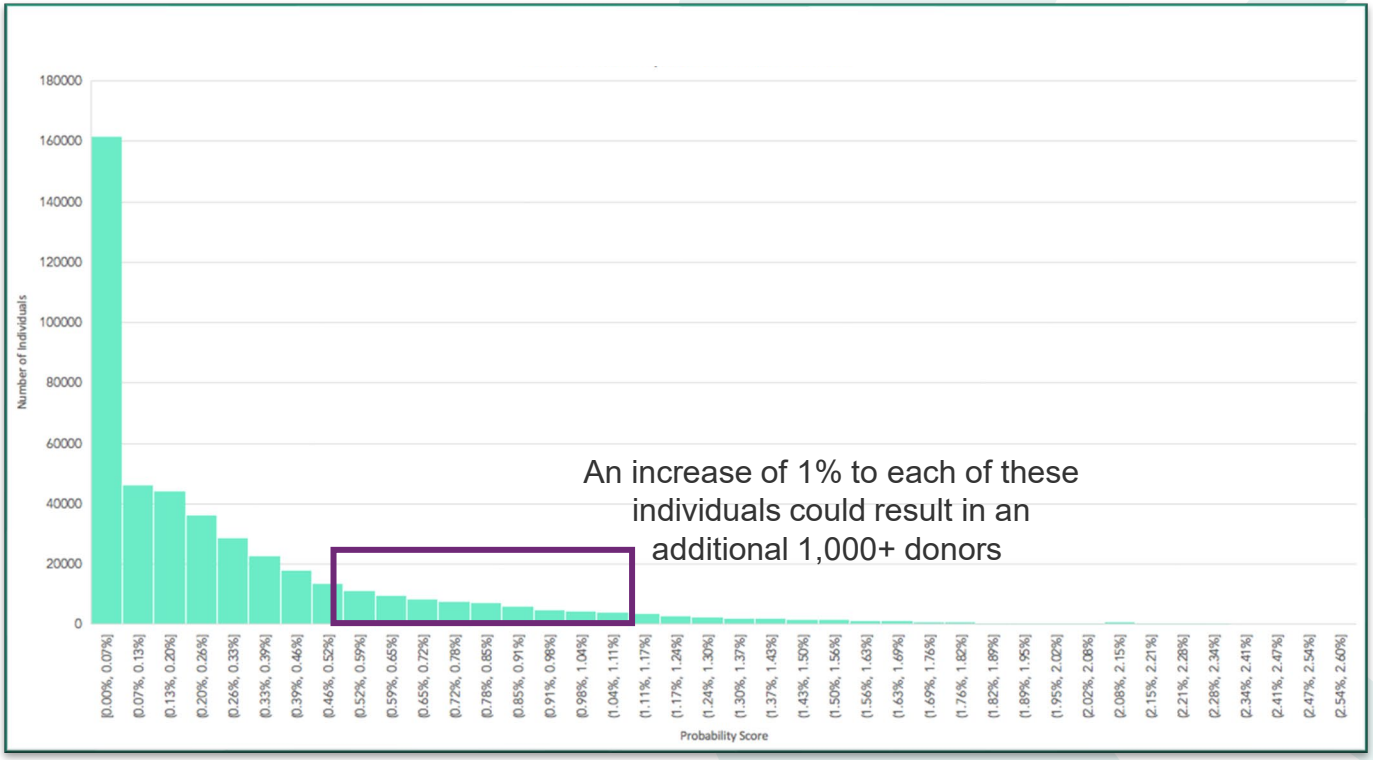
Even though probabilities are small for lapsed and non-donors, some are much more likely to donate than others



Slight increases in probability could have a big impact



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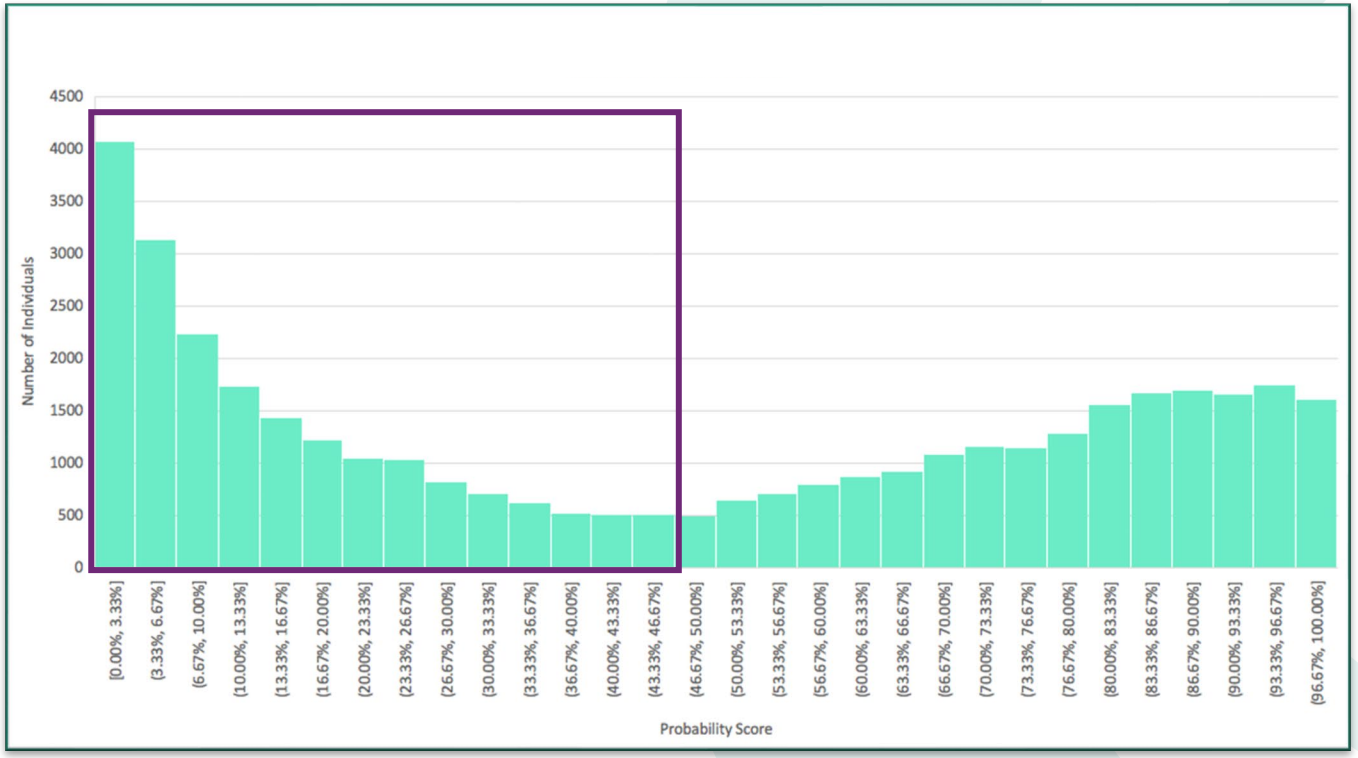
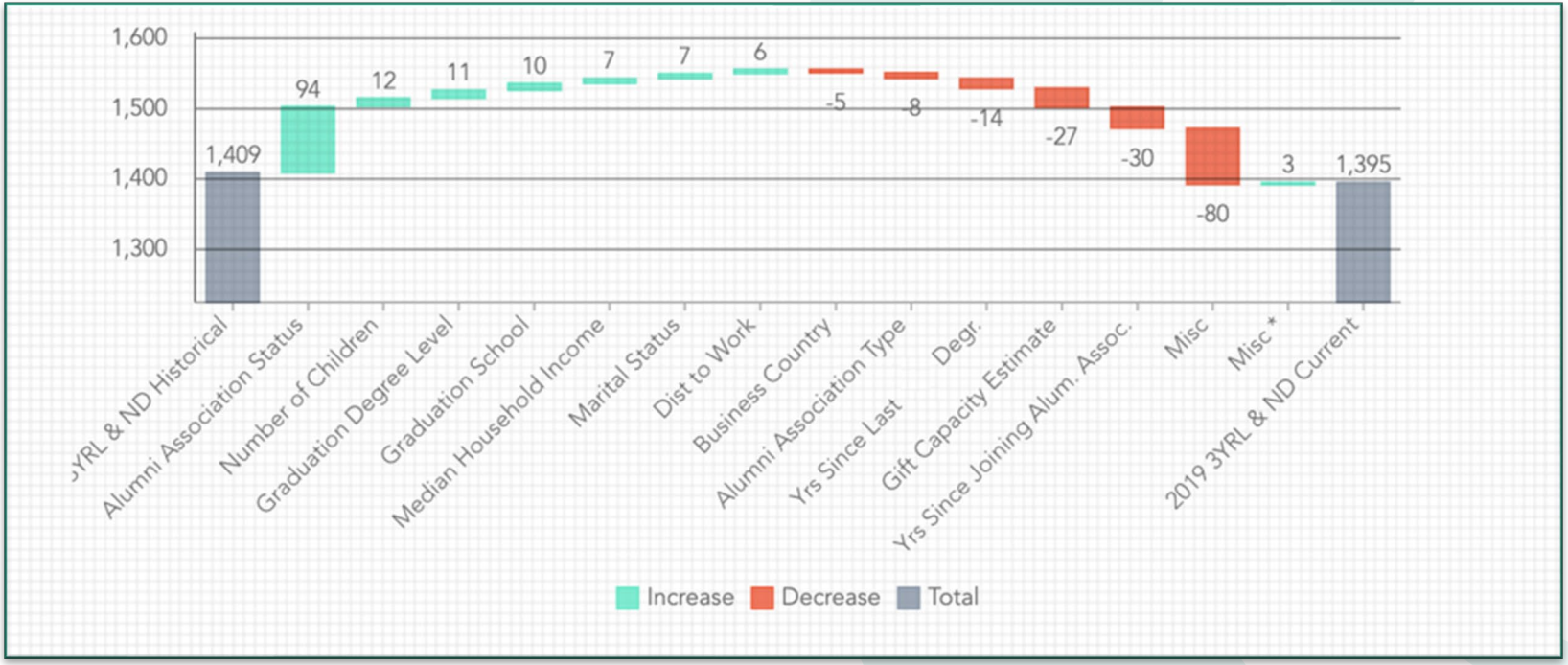
Focus on recent donors with low likelihood to identify donors who are at risk to churn



This Is Explainable AI

The impact of distinct variables on an individual's likelihood to give



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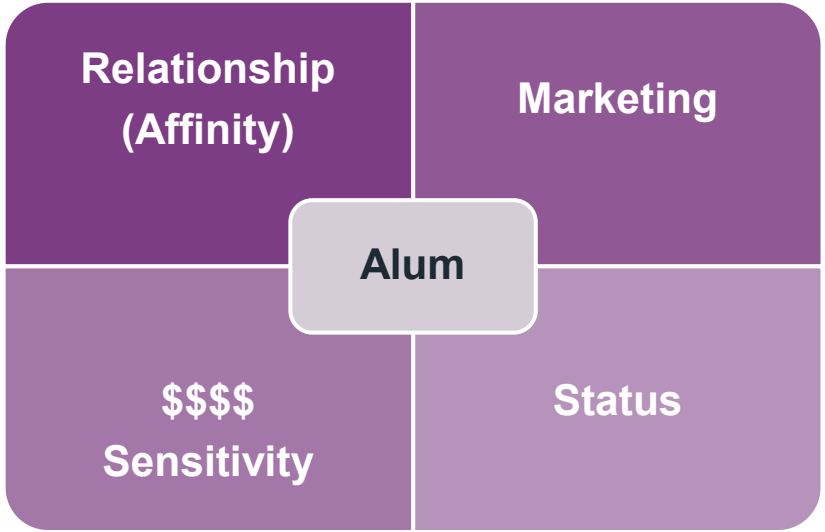
Looking Beyond Correlations

Capacity to Give	Total Average of Likelihood Score
R1 $10M+	0.83%
R2 $1M - $9.9M	0.79%
R3 $250K - $999K	0.70%
R4 $100K - $249,999	0.59%
R5 $25K - $99K	0.50%
R6 $10K - $24K	0.42%
R7 $2,500 - $9,999	0.36%
R8 LESS THAN $2,500	0.42%
R9 UNABLE TO RATE	0.01%
(blank)	0.10%
Grand Total	**0.30%**

	Average of Likelihood Score	
	Alumni Association Status	
Capacity to Give	ACTIVE	INACTIVE
R1 $10M+	1.00%	0.25%
R2 $1M - $9.9M	0.96%	0.30%
R3 $250K - $999K	1.04%	0.39%
R4 $100K - $249,999	0.95%	0.33%
R5 $25K - $99K	1.02%	0.31%
R6 $10K - $24K	1.00%	0.27%
R7 $2,500 - $9,999	1.02%	0.26%
R8 LESS THAN $2,500	1.02%	0.31%
R9 UNABLE TO RATE	0.15%	0.00%
(blank)	0.86%	0.11%
Grand Total	**0.95%**	**0.19%**

Wrap up – What You Can Do “Back Home”

Data to Insights to Action



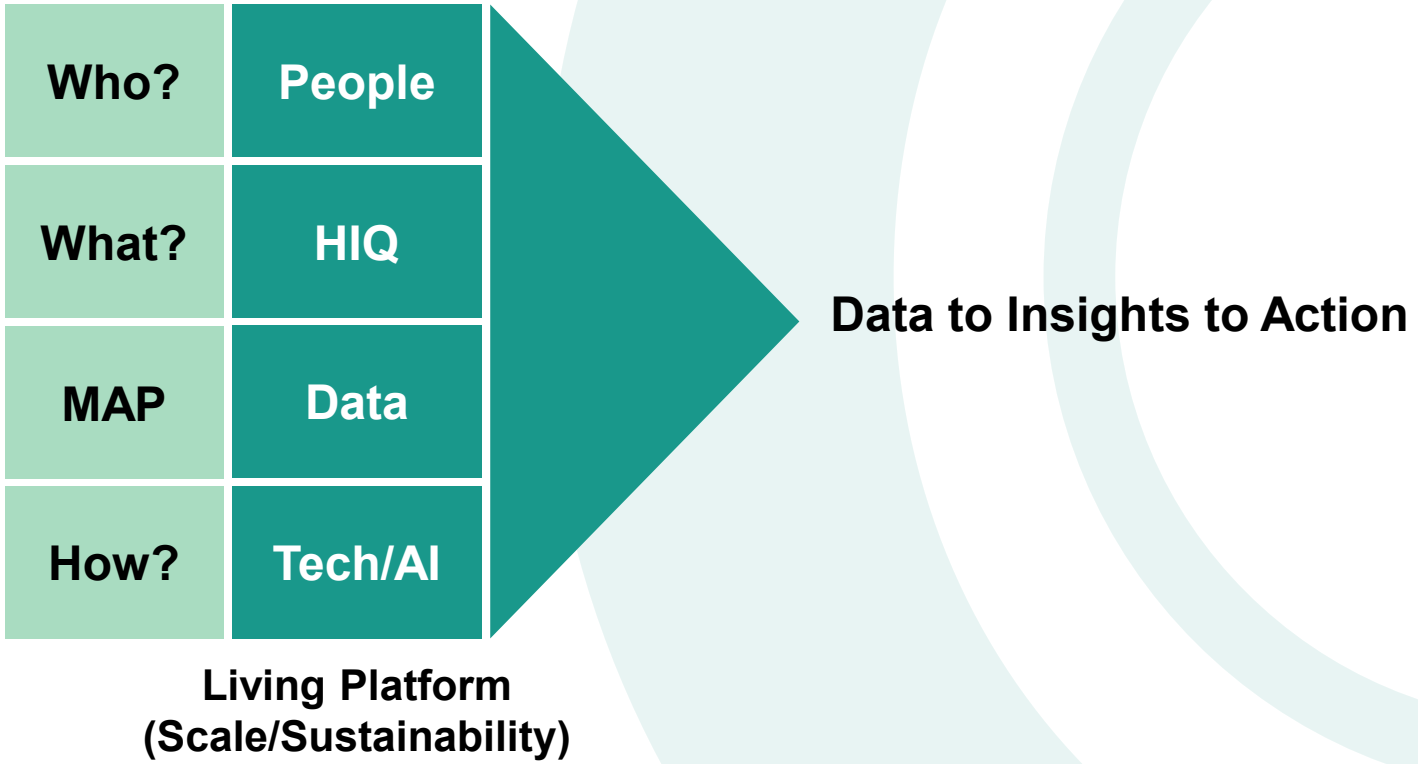
HIQ to Target Personalized Interaction

Next Best Action

Behavior

Next Best Action

Insights to Action: Can you fill in the boxes for your organization?



Any Questions?

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We are the future of higher ed advanced analytics - providing a clear vision of outcomes to make the best decisions possible for your students and your institution