

# Using Predictive Workforce Analytics to Drive Business Performance

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Analytics

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# “Analyzing Today’s Audience”

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# Predictive Analytics and the Workforce

- A few of you:
  - Aching to get your hands on data; analyze it; write predictive models.
- Many of you:
  - Paralyzed by the fear of predictive analytics.
  - “I didn’t sign up for this”
  - “I’m being pushed into being an analyst or data scientist”
  - “I have no interest in moving in that direction”

# Today You Will Stop Being Afraid of Predictive Analytics



# What You Will Learn Today

- How predictive analytics affects business performance
- Non-data scientists bring tremendous value to the predictive process
- You have a role and value in the predictive process
- HR and the business need *you*

If I Can Do It, You Can Too

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# What I Am Not

- A data scientist
- Do not have a Ph.D.
  - Undergraduate degree in the Behavioral Sciences
  - Graduate work in clinical counseling
- Career prior to Talent Analytics in tech. sales
- Out of my comfort zone -- a lot

# What I Am . . .

- CEO for a predictive analytics company
- Program Chair: Predictive Analytics World - for Workforce
- Instructor on predictive analytics – University of California Irvine
- Care deeply about how performers tie to performance

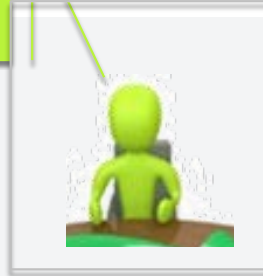


# Predictive Projects Require a Variety of Roles

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# Your Predictive Team

Data  
Scientist



# Your *Extended* Predictive Team



# What is Predictive Analytics and Why Is It So Important

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# What is Predictive Analytics?

- Recognizing patterns in data – to help make better decisions
  - “When these things happen” – higher likelihood  
“those” things happen as well
  - Easier pattern
    - Sniffy nose → higher likelihood I might get a cold
  - Complex (less obvious) patterns require software
- Predictive analytics process: analyzing data to find patterns

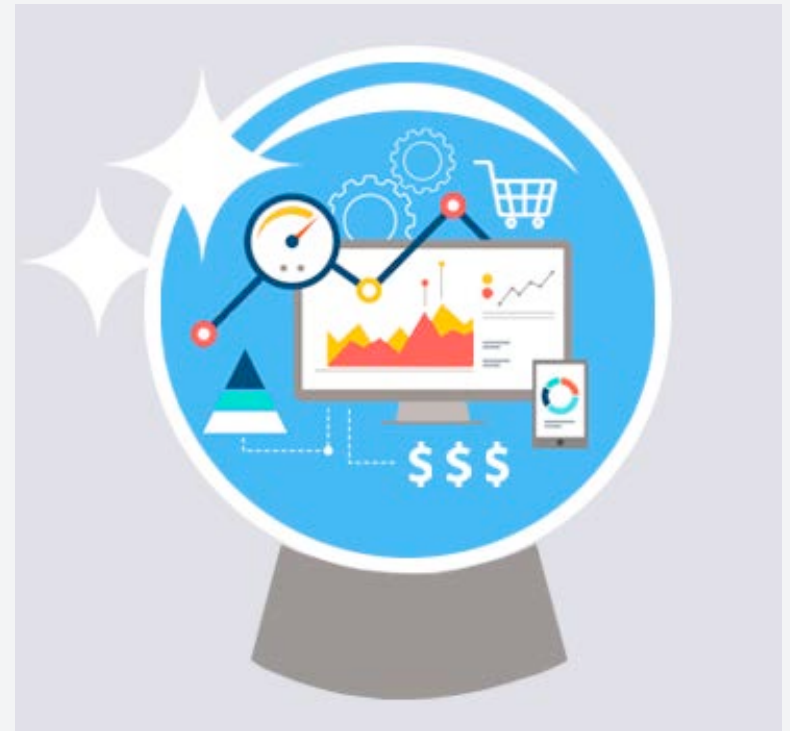
# Predictive Analytics is So Important for 1 Reason Only

Delivers better business results  
than your decisions today



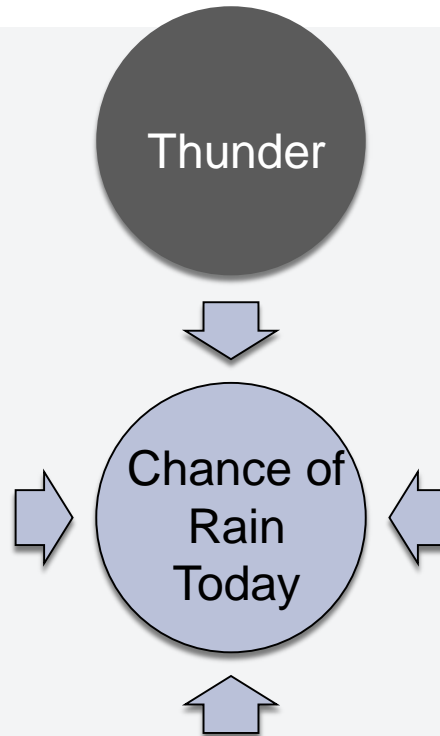
# Characteristics of the Predictive Process

- Accountable, transparent, fair. Removes “mystery factors”
- Predictions programmed to “hunt for success”
- Repeatable on a grand scale.
- Predictive process learns from its mistakes, gets smarter over time



# Recognizing Patterns

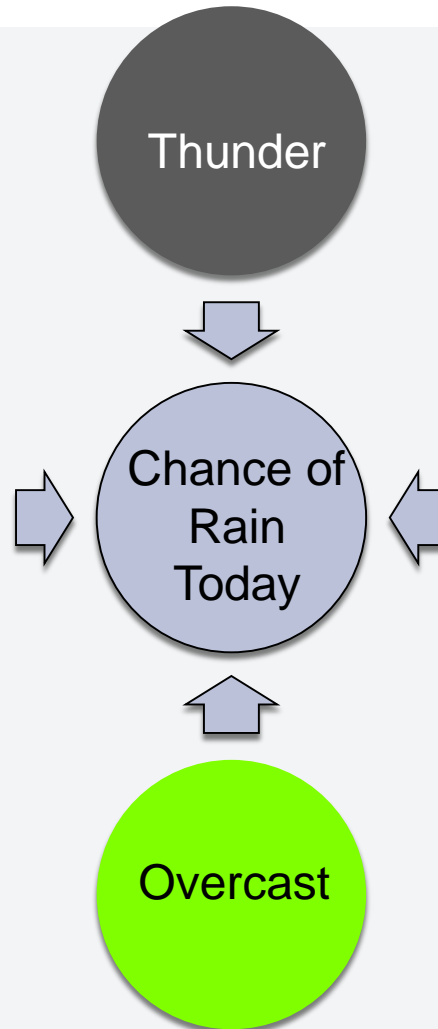
## Will it Rain?



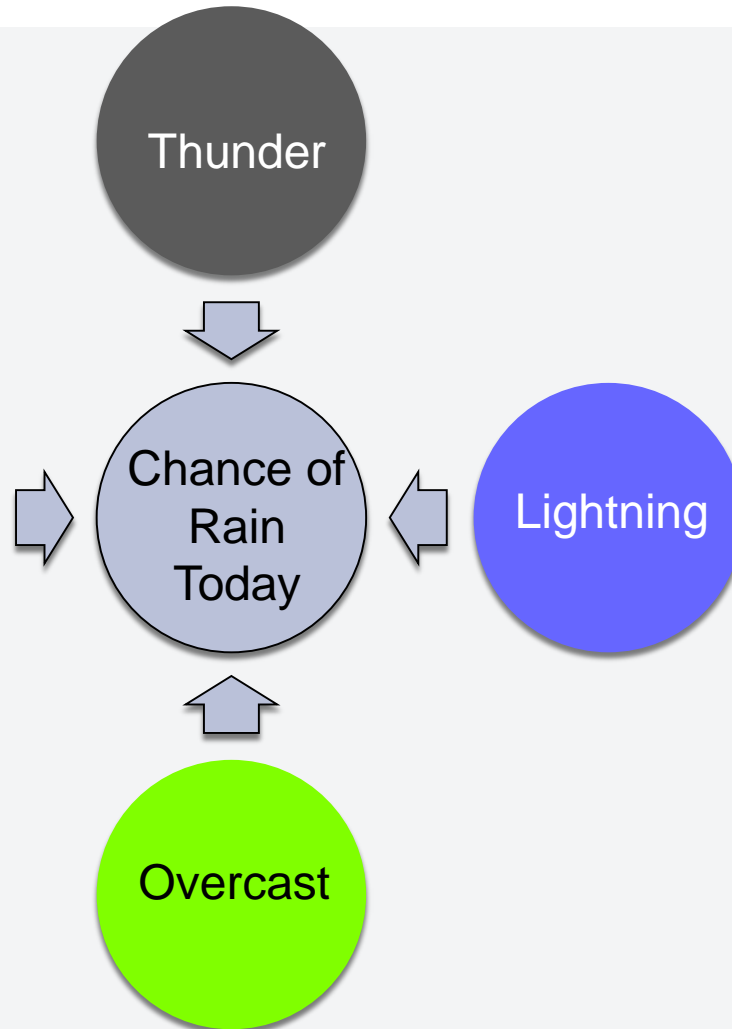


# Recognizing Patterns

## Will it Rain?

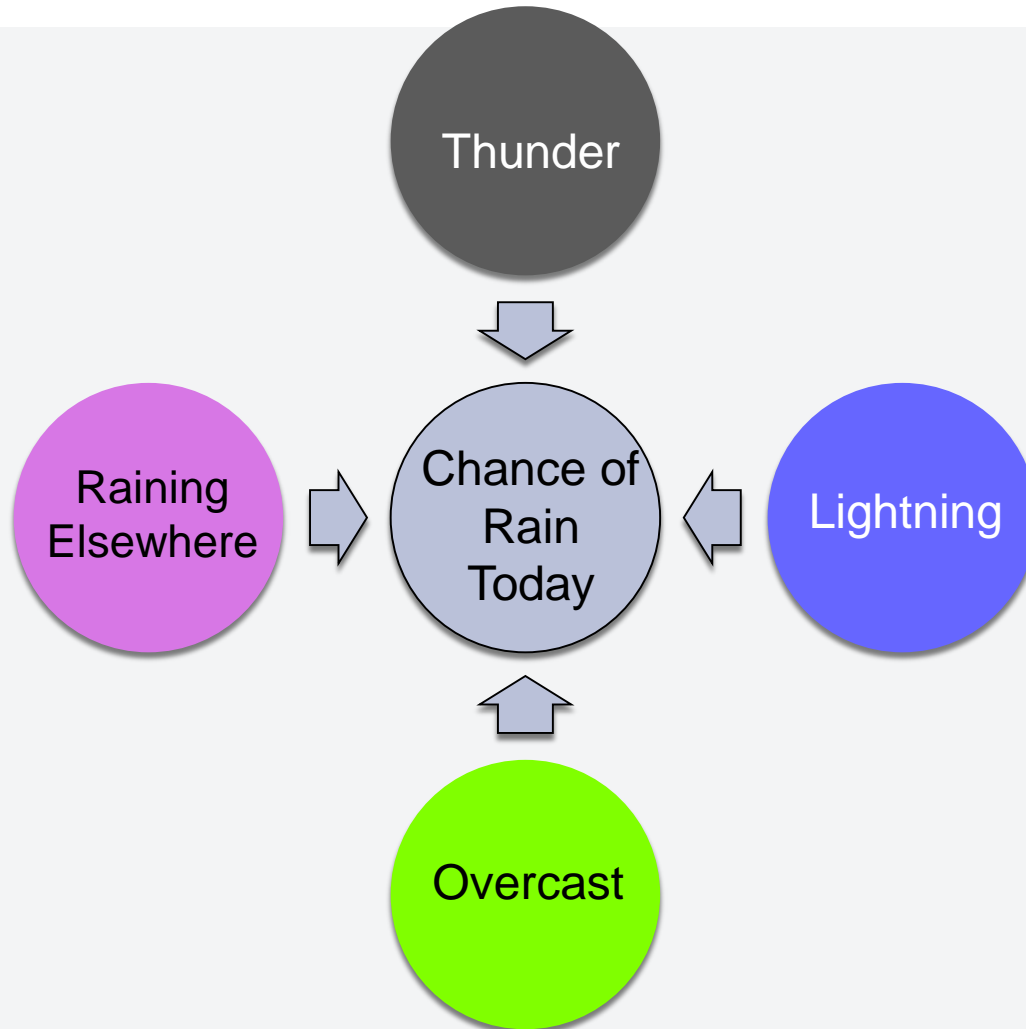


# Recognizing Patterns Will it Rain?



# Will it Rain?

More Data Points Intersecting / Greater Likelihood



# Which Kind of Predictions Deliver the Highest ROI

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# Types of Predictive Projects

HR Project  
Data from HR  
Solve HR Problems

Line of Business Project  
Data from Line of Business + HR  
Solve Business Problems

# Types of Predictive Projects

	HR Project Data from HR Solve HR Problems	Line of Business Project Data from Line of Business + HR Solve Business Problems
Predicting Trends		
Individual Prediction		

# Types of Predictive Projects

	HR Project Data from HR Solve HR Problems	Line of Business Project Data from Line of Business + HR Solve Business Problems
Predicting Trends	<ul style="list-style-type: none"> <li>• Staffing levels / WF Planning</li> <li>• Best time to contact candidates, for hiring or for reviews</li> <li>• Predict training attendance</li> <li>• Predict when they will retire</li> </ul>	<ul style="list-style-type: none"> <li>• Which training delivers best <i>business</i> results</li> </ul>
Individual Prediction		

# Types of Predictive Projects

	HR Project Data from HR Solve HR Problems	Line of Business Project Data from Line of Business + HR Solve Business Problems
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Individual Prediction	<ul style="list-style-type: none"> <li>• Flight risk of current employees</li> </ul>	<ul style="list-style-type: none"> <li>• Which candidate to hire</li> <li>• Which employee to promote</li> <li>• Best career path for a specific employee</li> <li>• What and whom to invest in</li> </ul>



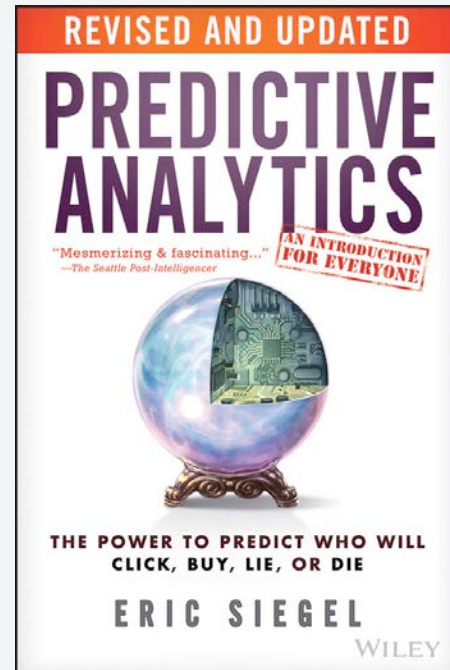
# *Individual* Predictions Deliver Highest ROI

## “Predictive Models –

A mechanism that predicts the behavior of an individual, such as click, buy, lie, or die ....”  
(or perform, or turnover)

“The higher the score, the more likely it is the individual will exhibit the predicted behavior.”

Dr. Eric Siegel, Predictive Analytics:  
The Power to Predict Who Will Click, Buy, Lie, Die



# Biggest ROI

## Move Beyond Forecasting and Trends

- Move beyond Workforce planning
- Move beyond Sales forecasting
- Move beyond aggregate retirement planning / forecasting
- Insurance recognizes largest savings / revenue ...
  - Predict ***probability of individuals*** who will have accidents in their car, their home etc., lose things, and the like

# Predictive Examples

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# Predictions to Calculate Insurance Risk

- Each category (Auto – Home – Commercial...)
  - Has their own models
  - Has their own important variables
  - Asks different questions
  - Risk (cost and value) of insuring is different
- Would make little sense to use a single model to calculate risk of insuring everything
- Need custom models

# Variables that Help Calculate Auto Insurance Risk



# Predictions to Calculate Hiring Risk

- Each role (Sales, Customer Service, Agents . . . )
  - Has their own models
  - Has their own important variables
  - Asks different questions
  - Risk (cost and value) of hiring is different
- Would make little sense to use a single model to calculate risk of hiring all roles
- Need a different model for each role

# Variables that Help Calculate Hiring Risk



# Finding Predictive Projects

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# Most Important Phase?

## Nothing Begins Until You Find a Project

- Help identify something to predict
- Design the Project
- Help Gather Data to Analyze
- Data Preparation
- Data Mining and Analytics
- Programming
- Modeling
- Visualization
- Interpretation
- Presentation
- Project Management



# How to Explore for Predictive Projects

- Single Line of Business/Role
  - I.e. Underwriter
- Specific Outcome
  - Probability of having a large book of business
  - Probability of passing certification / regulatory exams
  - # of files analyzed
  - % of insurance paid



# What Can All Companies Do, Now Regardless of Size

1. **Start on the path** to predictive projects
  - Goal: Begin moving down the predictive path
  - Ask all HR vendors for your data (HRIS, ATS, Talent Assessments)
  - Make friends with the LOB operations folks
2. Talk to Line of Business Managers about their job goals



# Don't Forget the Single Reason to Use Predictive Analytics

- Better business results
  - Reduce employee turnover
  - Increase employee performance

I hope you'll join me on your predictive journey!

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