



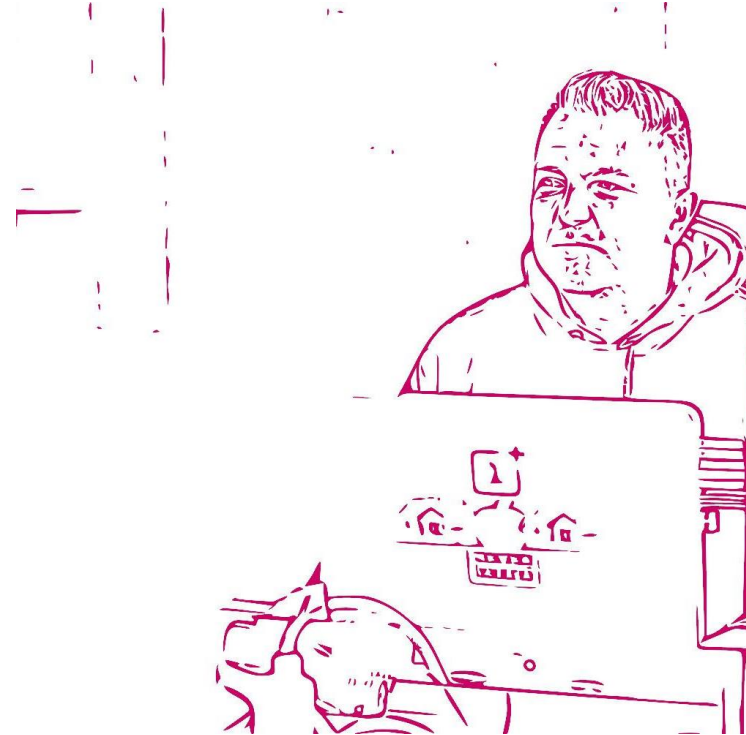
ML in the Other 95% of businesses



## **Ed Thewlis**

Director

Doesn't do much work anymore. Can be found at the coffee bar or laid on the sofa.



## **Tony Jozefek**

Head of Analytics

Hates dogs, balloons and people. Loves Data and Statistics

## Stuff we want to talk about:

- My business doesn't deal with cats or dogs.  
Can I still use AI?
- What should my main priorities as a data/ML person be?
- How can I bring ML to more areas of my business?



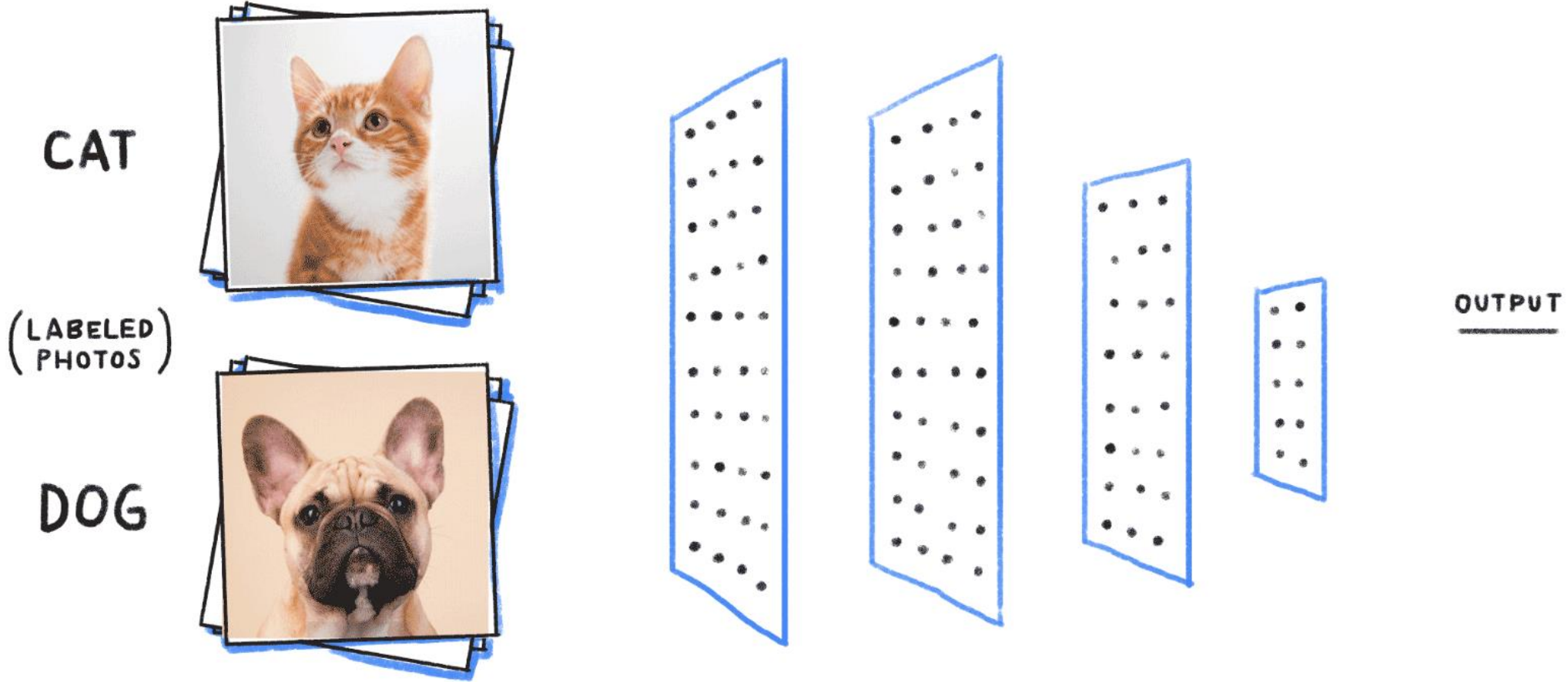
When you're fundraising, it's AI

When you're hiring, it's ML

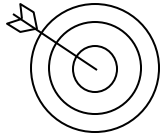
When you're implementing, it's linear regression



AI: Helping to solve the complex **technical** challenges within a wider problem space

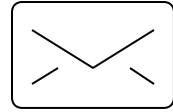


Most businesses' problems aren't **technically** complex.



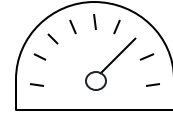
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Who are my customers?



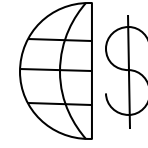
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How should I talk to my customers?



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What does revenue look like in 12 months?



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Will my customers repay their loans?



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Which customers might want to buy my new product?



What's my job as an ML practitioner?

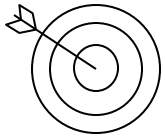
Fix the problems in your business that aren't **technically** challenging

Build your team and approach to keep it **fun** and **resource efficient**

Automate everything

Don't be cynical about AI, but don't think it's going to solve all your problems

Fix the less 'technically' challenging questions

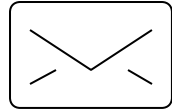


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Who are my customers?



Clustering  
(describe) or  
Decision Trees  
(value)

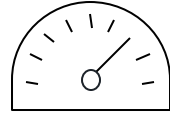


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How should I talk to my customers?



Logistic Regression  
(Channel preference/  
propensity)

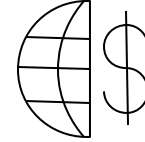


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What does revenue look like in 12 months?



Time Series  
Forecasting



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Will my customers repay their loans?



Logistic Regression,  
Survival/Hazard  
Model



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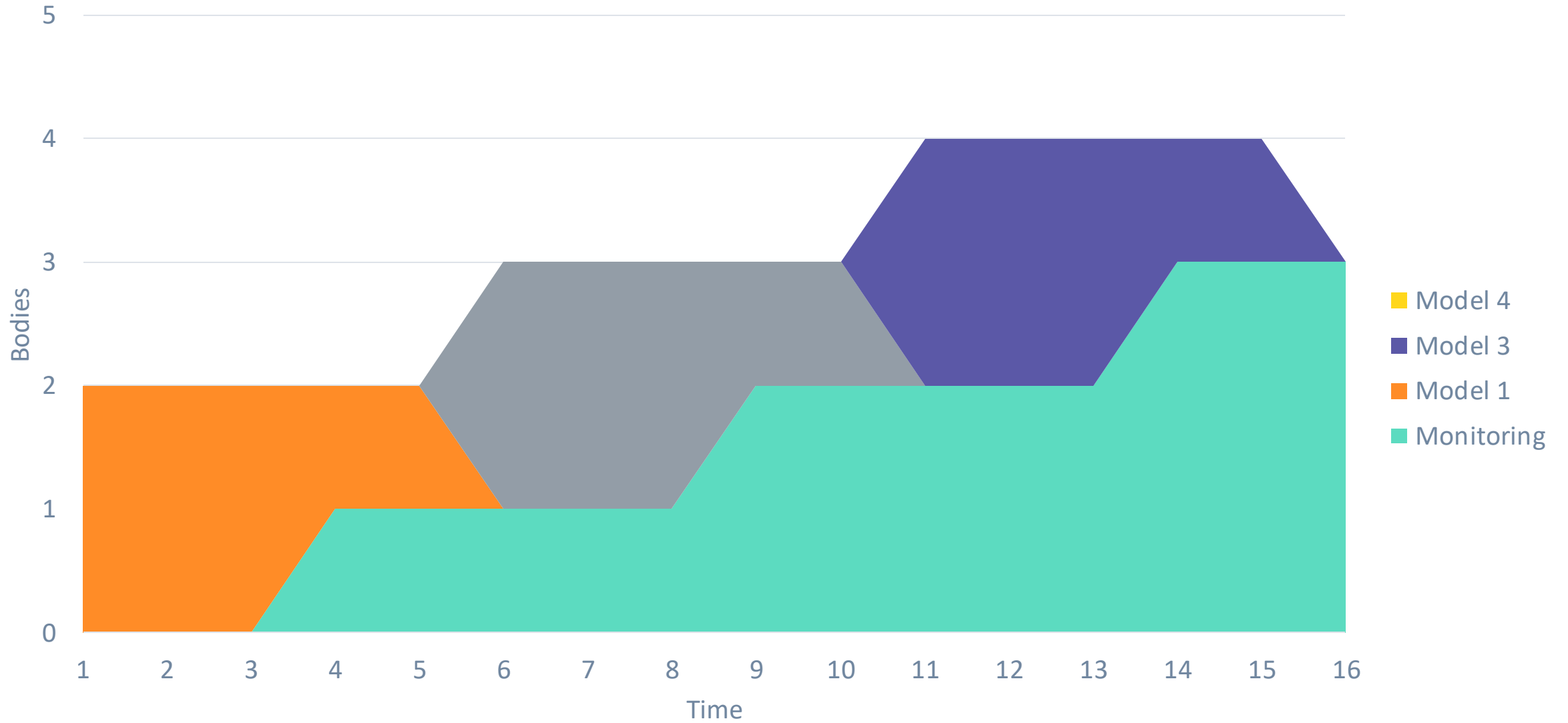
Which customers might want to buy my new product?



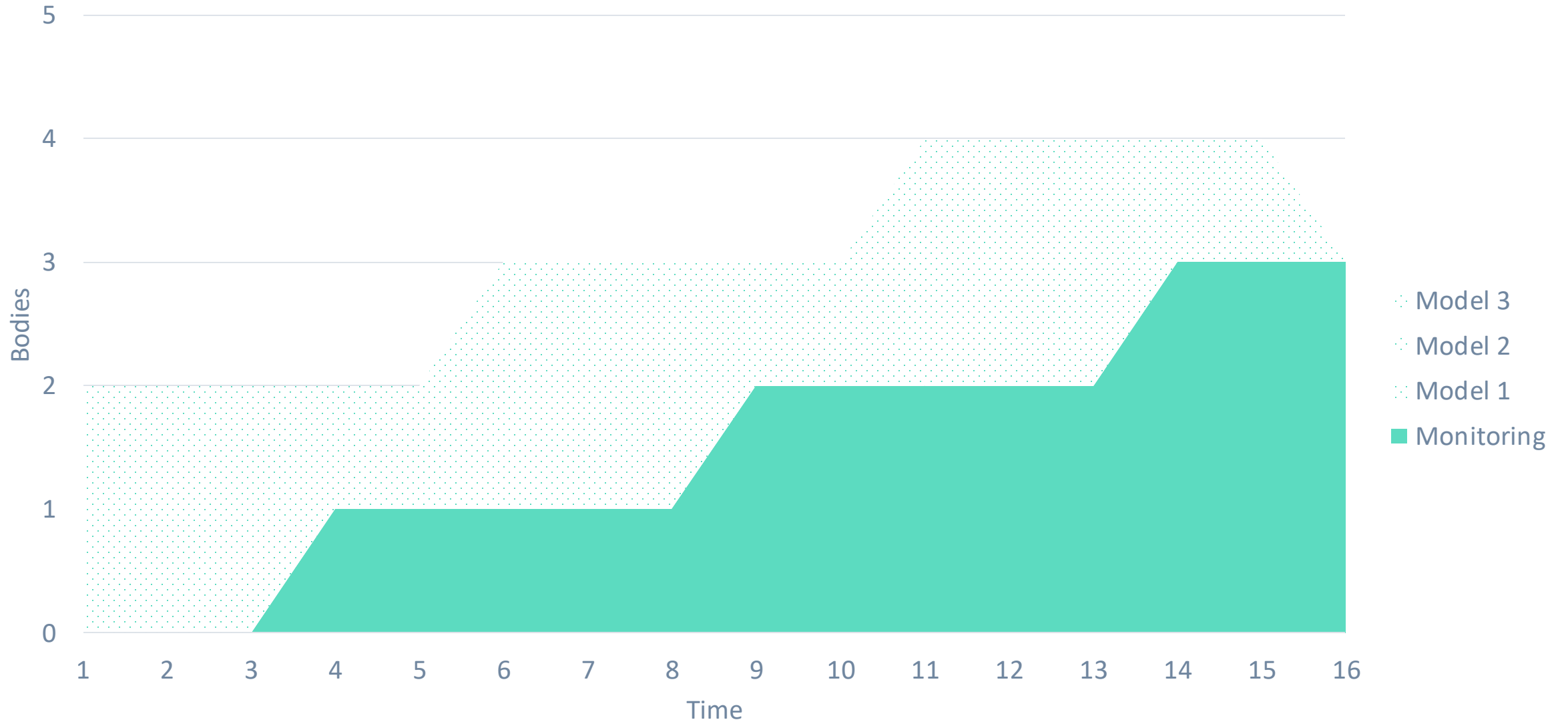
Logistic Regression,  
Matchbox  
recommender

# Building an efficient team

# Effort Utilised - Thinking vs Monitoring

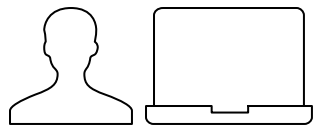


# Effort Utilised - Thinking vs Monitoring



Automate all of the things

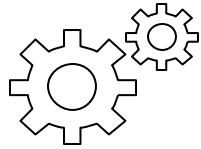




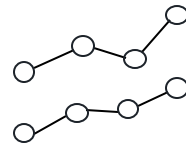
Experiment



High Value  
Human  
Interaction



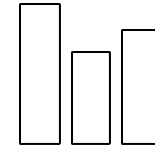
Train



Evaluate

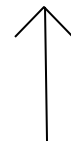


Publish

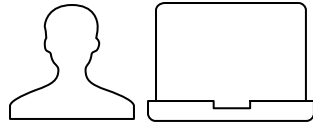


Monitor

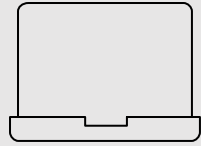
ML Pipeline



Low-to-Zero  
Value Human  
Interaction



Design



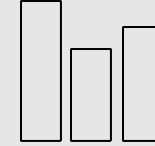
Develop



Test

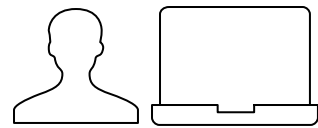


Release

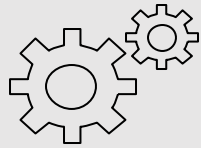


Monitor

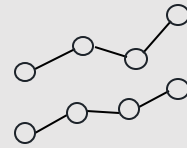
## Engineering Process



Experiment



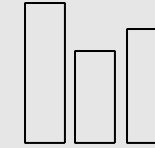
Train



Evaluate

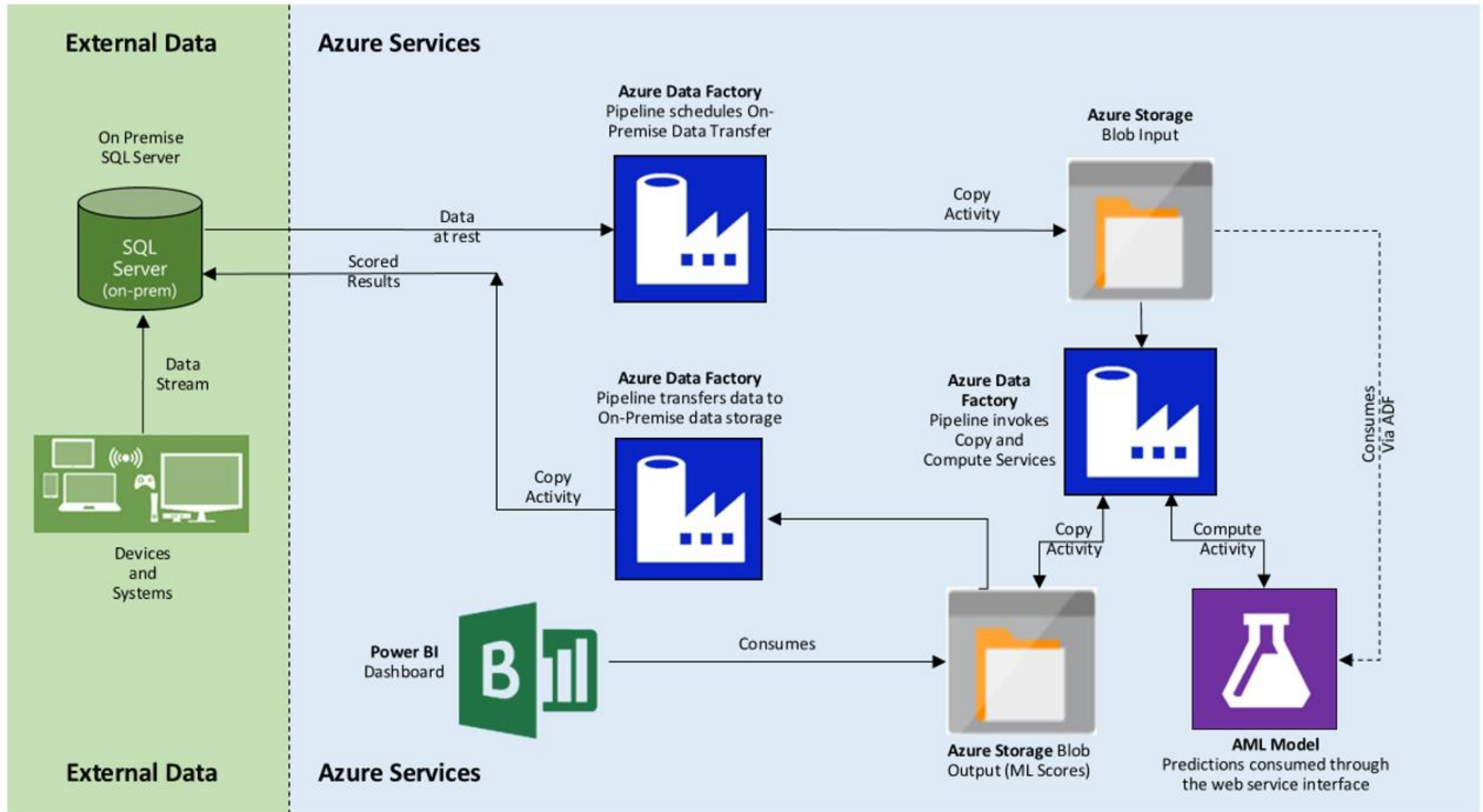


Publish



Monitor

## ML Pipeline

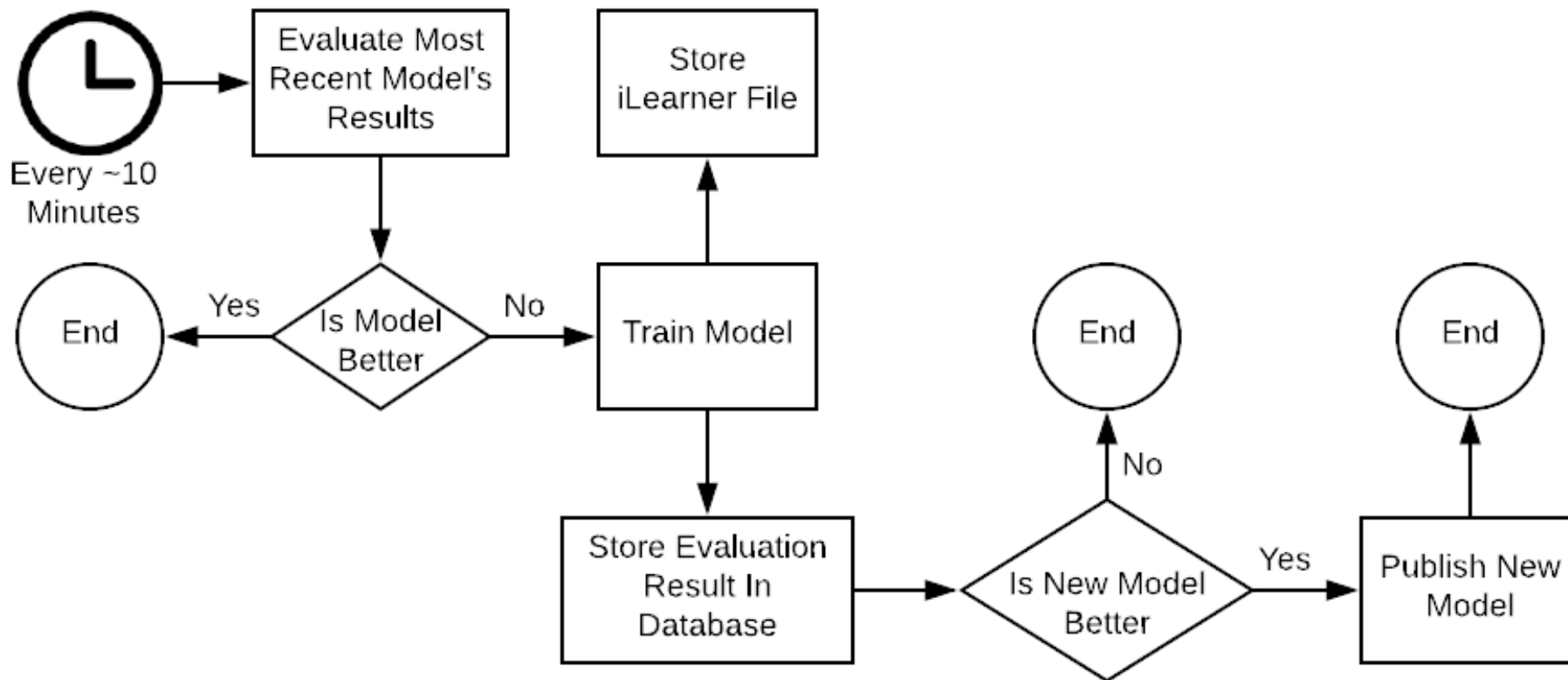


# Problem Statement

- Customer Applications have decisions made against them based on a score
- Applicants actual performance flagged as Good/Bad
- Small vector of input variables used to develop experiment & predict Good/Bad

# Conceptional Machine Learning Pipeline

250k records drip fed through scoring service pipeline at 100/minute



Pray to the demo gods...

So... what should I do tomorrow?

- **Evaluate** where you spend vast chunks of your time
- **Identify** the ones that stop you doing something more valuable
- **Implement** automated approach to those tasks
- **Explore** new business problems or methods with your new found time
- **Enjoy** feeling more engaged and productive



Fix the problems in your business that aren't **technically** challenging

Build your team and approach to keep it **fun** and **resource efficient**

Automate everything

Don't be cynical about AI, but don't think it's going to solve all your problems



Any questions?