



# Monitoring AI in Production

Prophecy Labs, CTG & NannyML

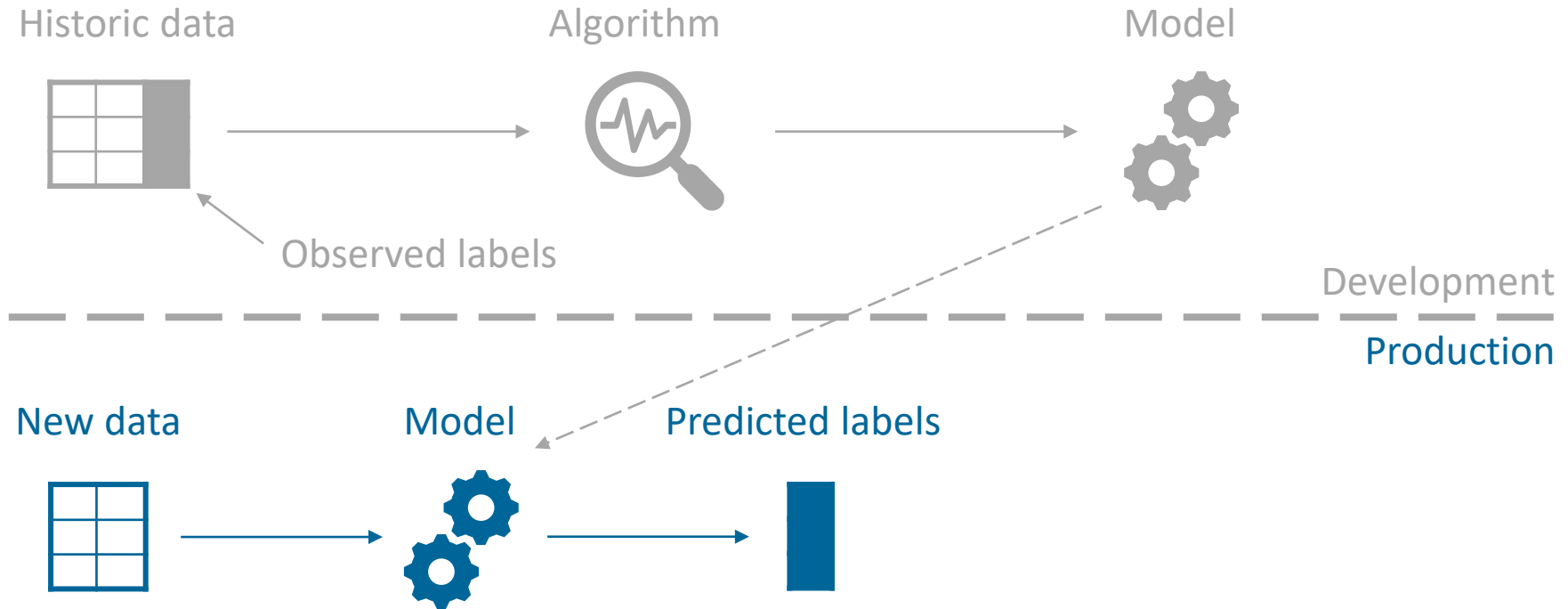
Wiljan Cools



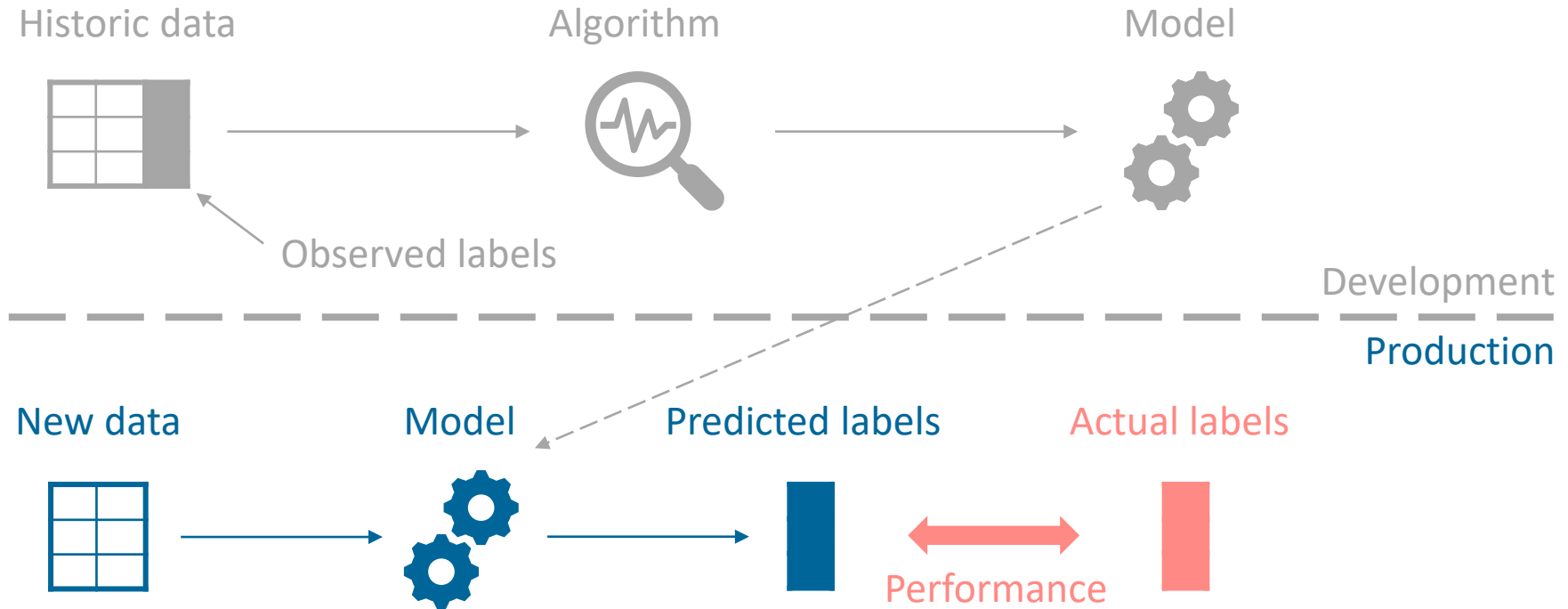
# ML in Development



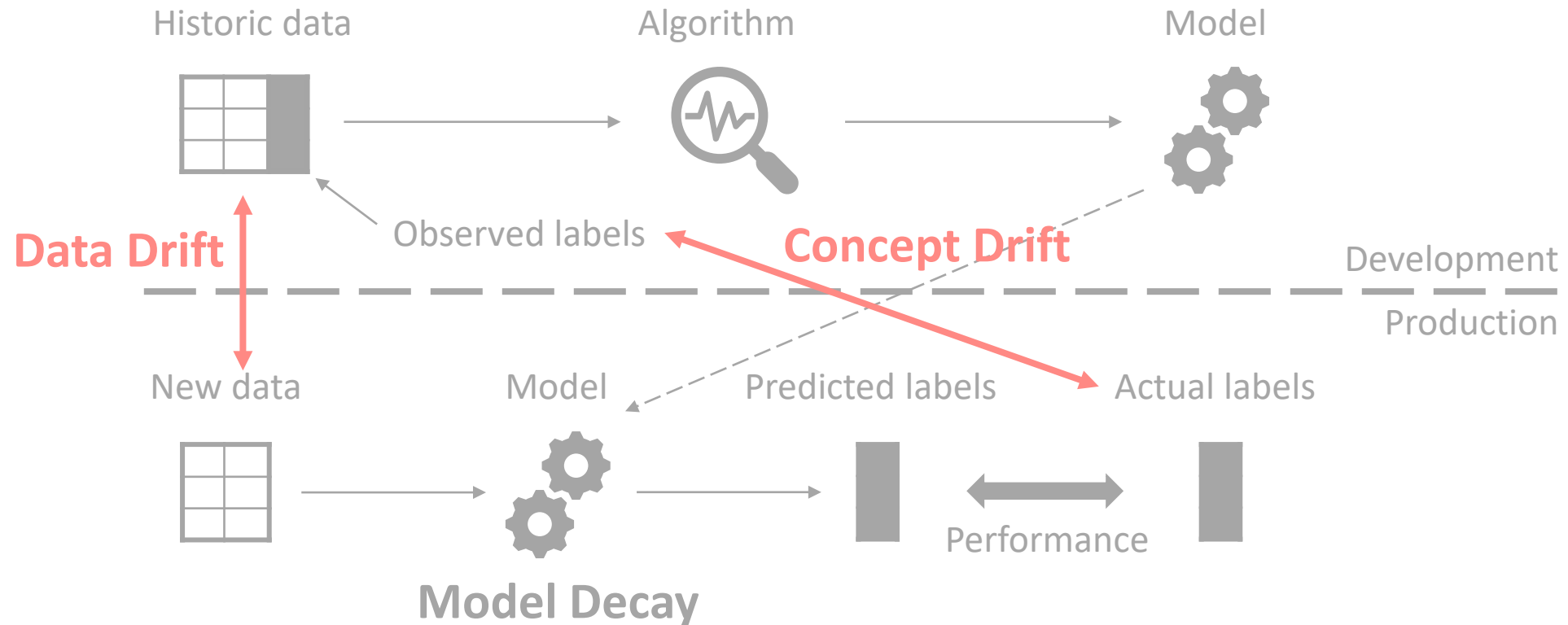
# ML in Production



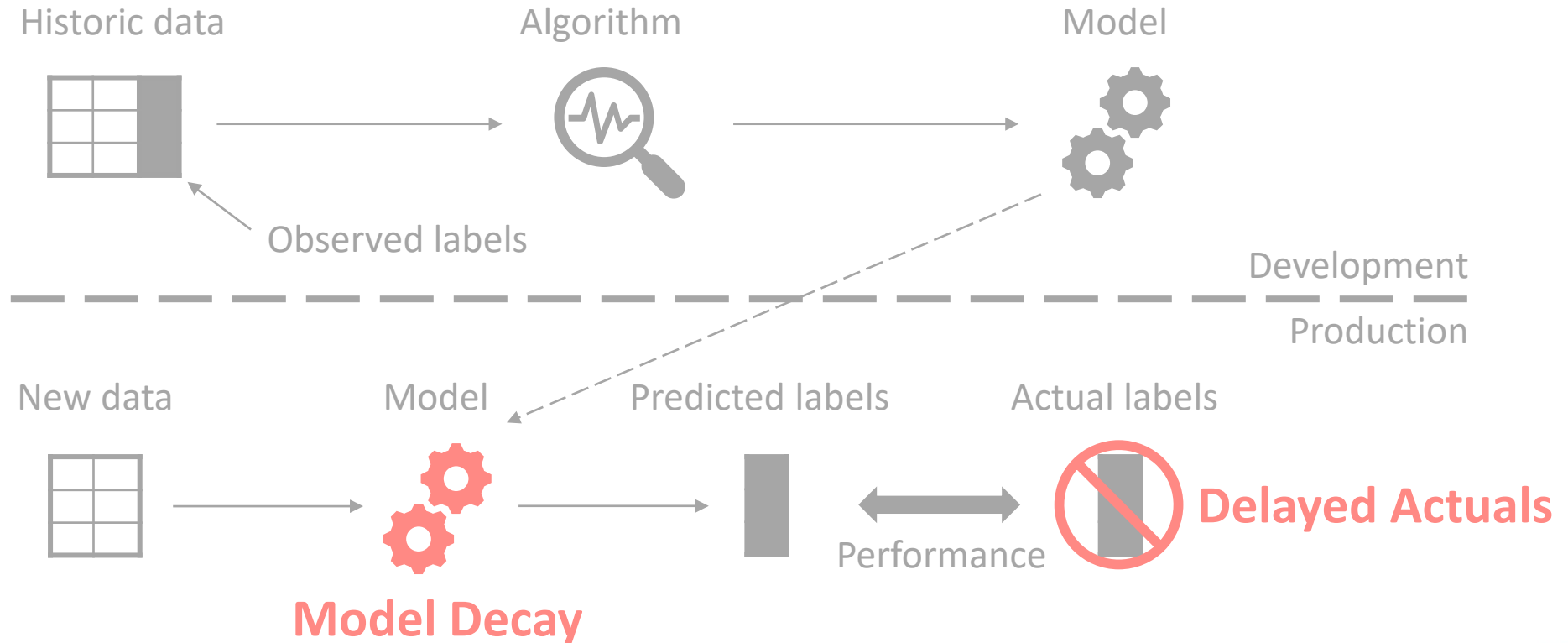
# ML in Production



# ML not being Supervised in Production



# ML not being Supervised in Production



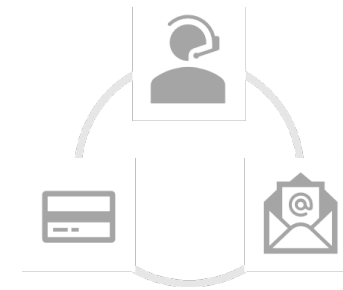
# The Impact of Supervising ML in Production

Churn prediction  
&  
Customer retention

Predict which customers will **churn**



Try to **retain** them



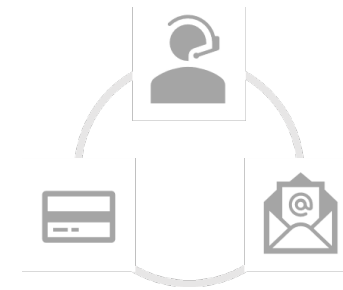
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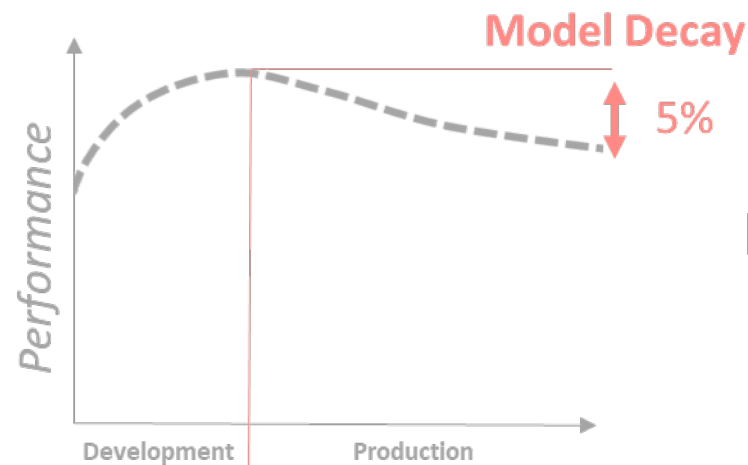
Try to **retain** them



Churn rate **2.6%**

Profit **650M**

Customers **2M**



Churn rate **2.86%**

Additional Loss **1.7M**

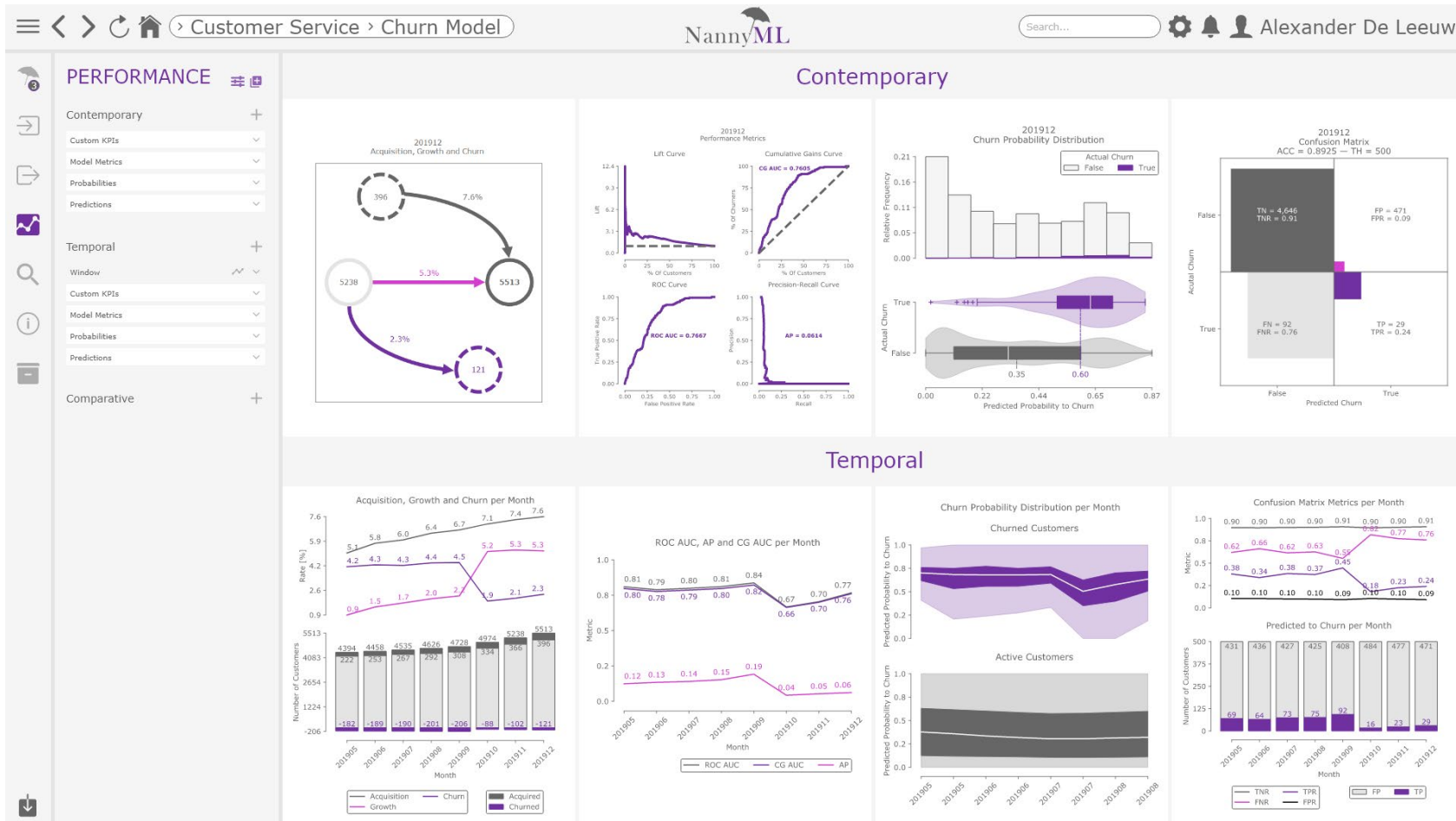
Additional Churners **5K**





# The Solution

An Enterprise Software that monitors AI in production by:

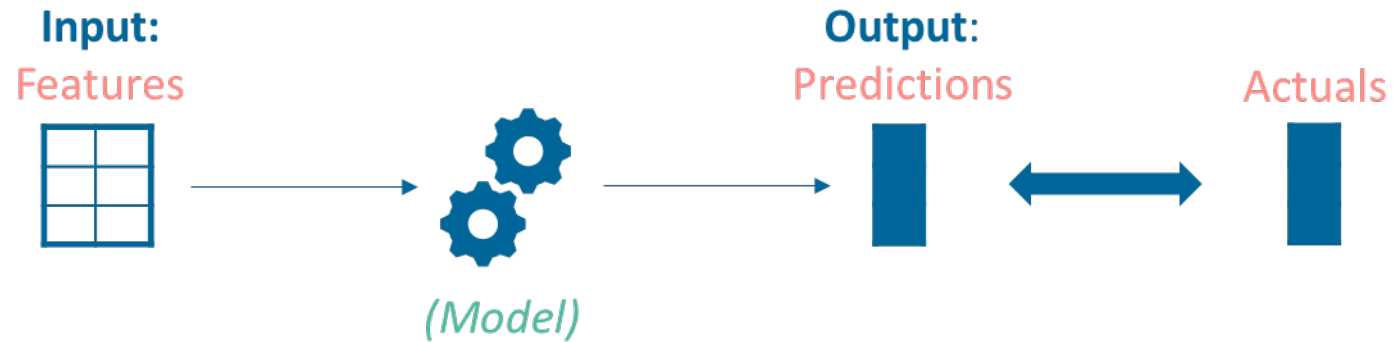


- ✓ Tracking **changes** in model input and predictions
- ✓ Measuring the **performance** of ML models
- ✓ Sending **alerts** and suggesting corrective actions
- ✓ **Explaining** AI behaviour



# How does it work?

- Data Dimensions



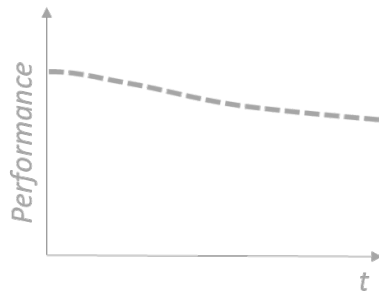
- Time Dimensions

- ✓ Contemporary
- ✓ Temporal
- ✓ Comparative



# How does it work?

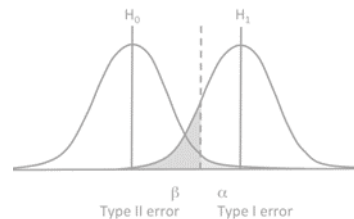
## Descriptive Data Analysis



## Diagnostic (& Predictive) Data Analysis

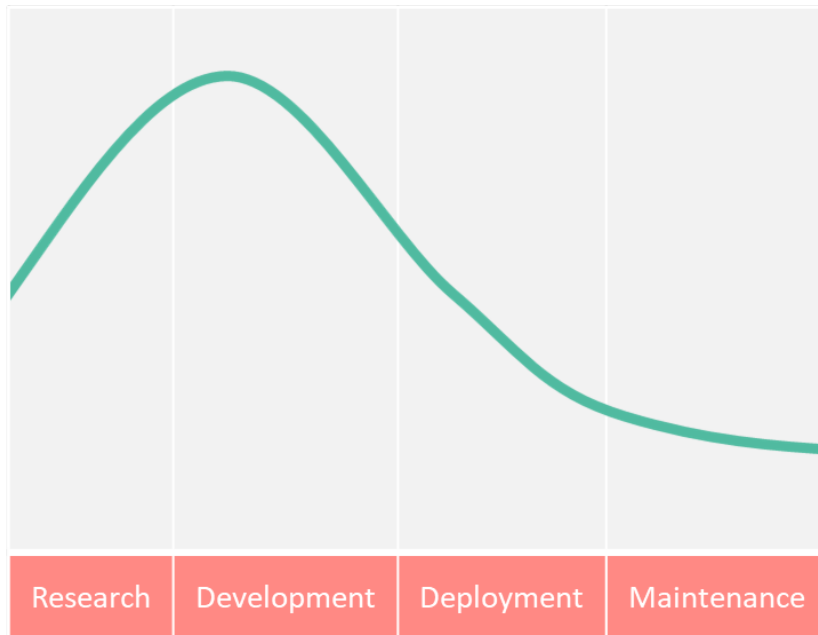


## Confirmatory Data Analysis

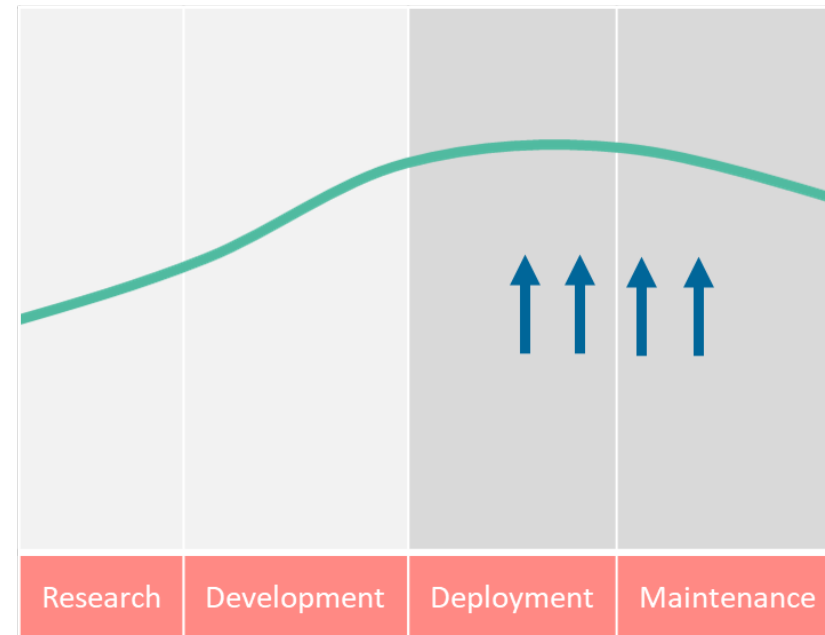


# The Future

## AI Focus Today

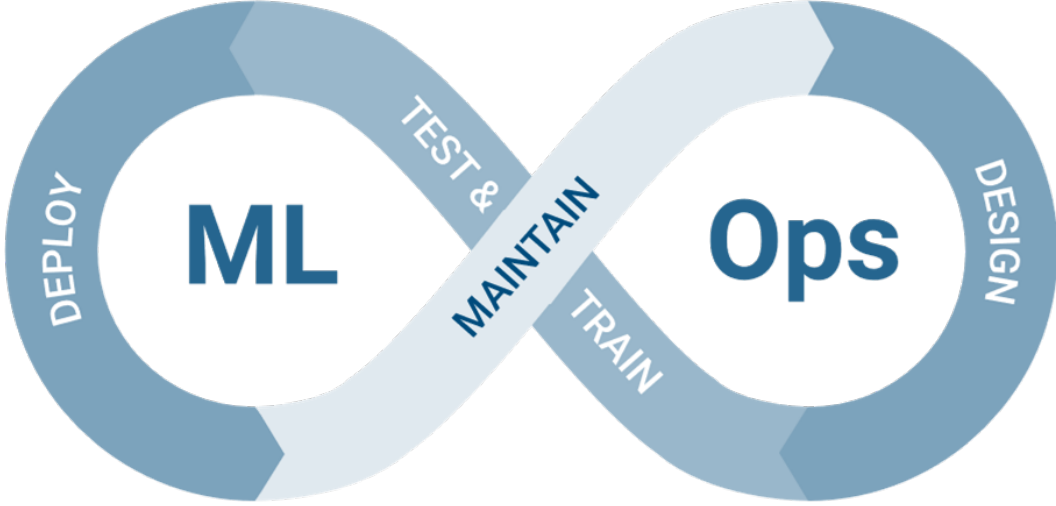
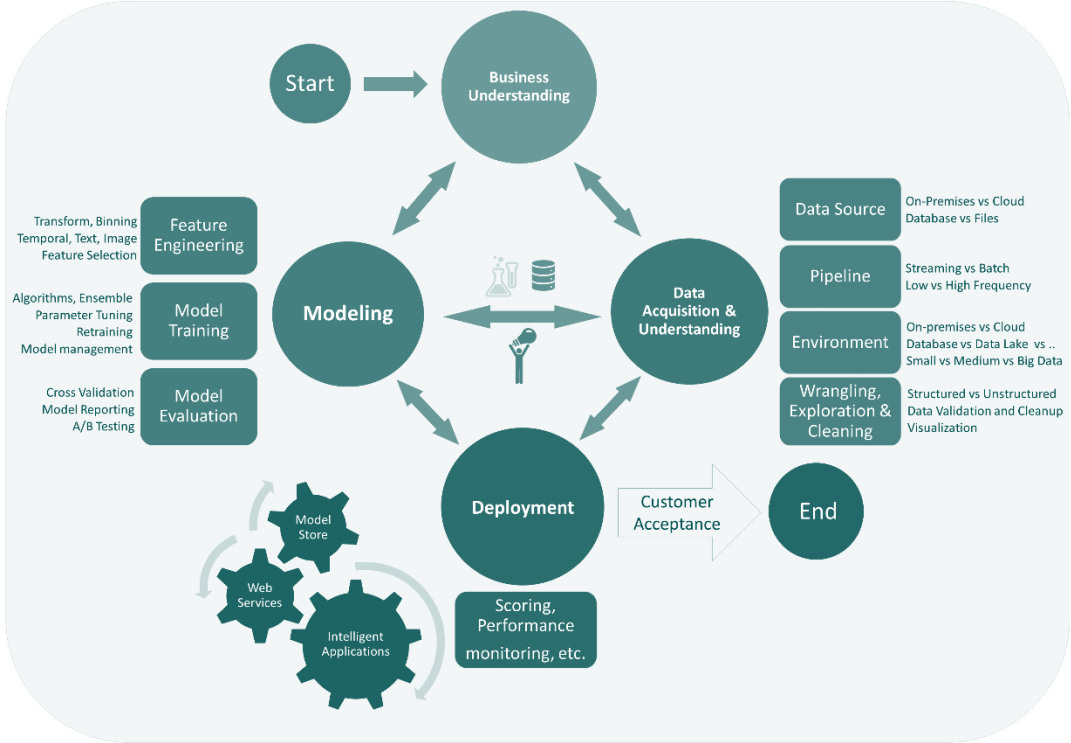


## AI Focus Tomorrow



# Bridging Business Understanding & MLOps

Data Science Lifecycle



# Where we are today

- POC finished
- Rolling out a Pilot Program
  - 6-8 weeks
  - Innovative companies
  - That have AI running in production making business critical decisions
  - Agile Customer Driven Development
    - ✓ Influence the product roadmap
    - ✓ Get tailor-made NannyML features
    - ✓ Solve your monitoring problems
- [get@NannyML.com](mailto:get@NannyML.com)



# In summary



- Understand that production data is dynamic
- Try to monitor AI in production
- Try to track performance
- Try to detect data drift
- Try to prevent model decay
- Try to extract insights from your AI's behaviour

No Insights Why

