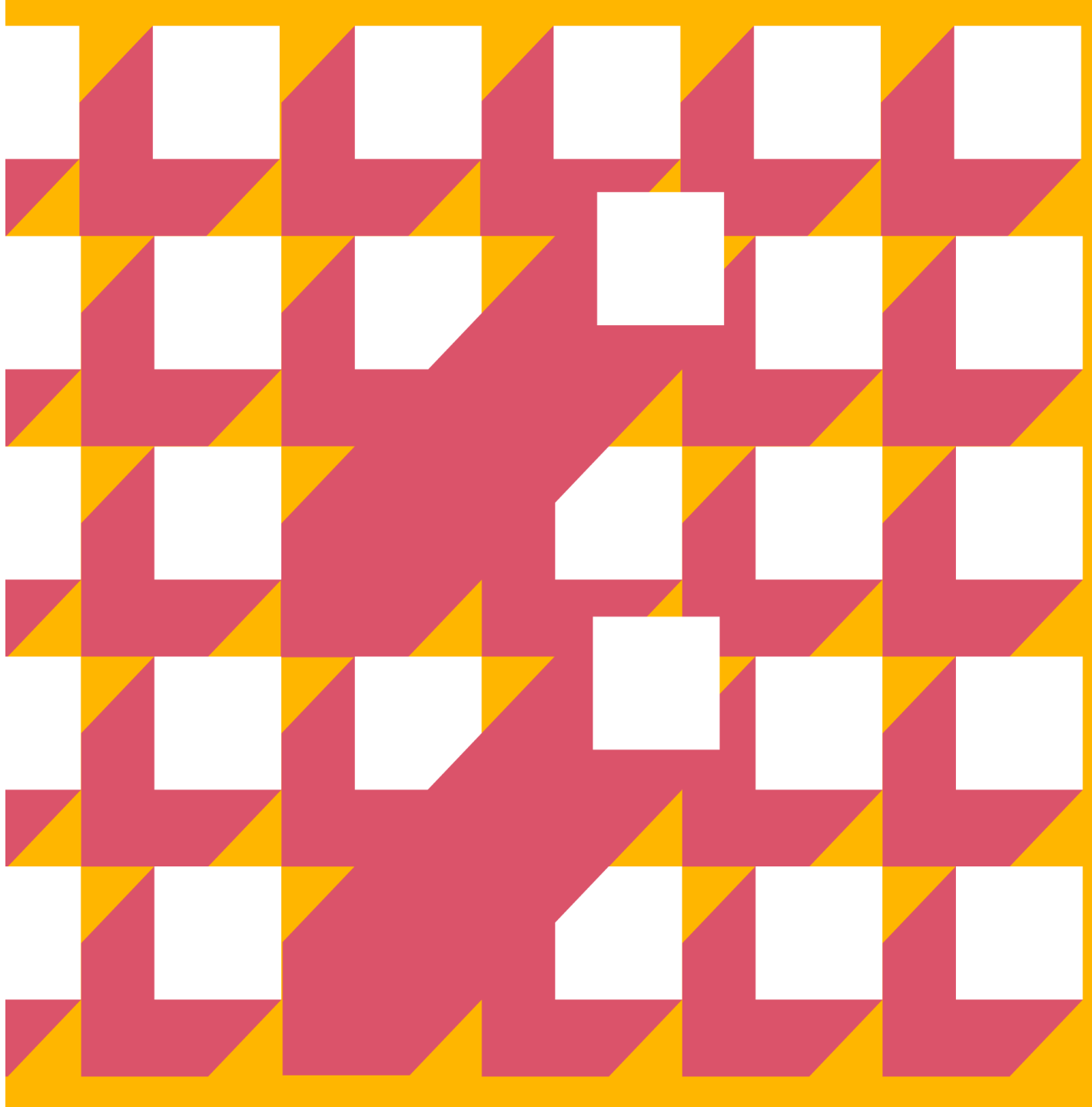


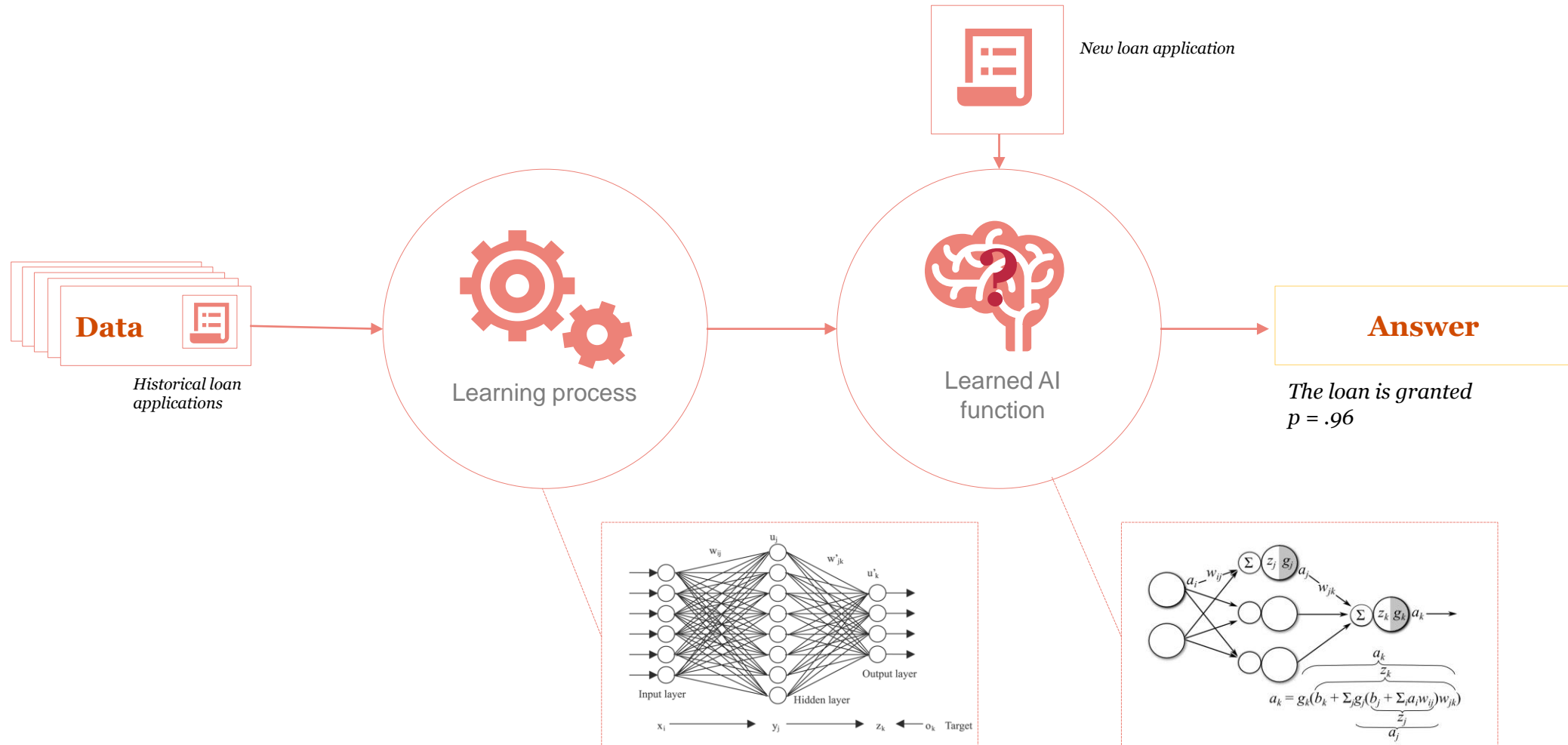
Using machine  
learning to  
identify unusual  
patterns in data



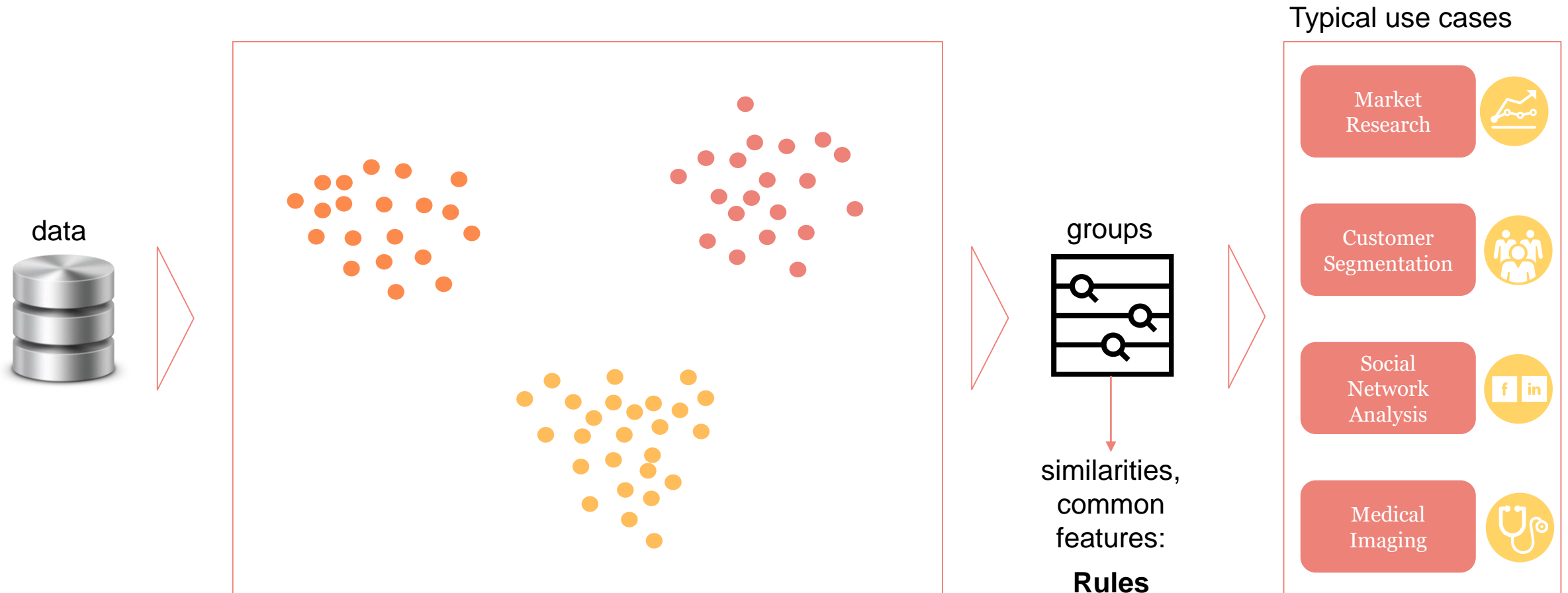


# Introduction Machine Learning & Anomaly Detection

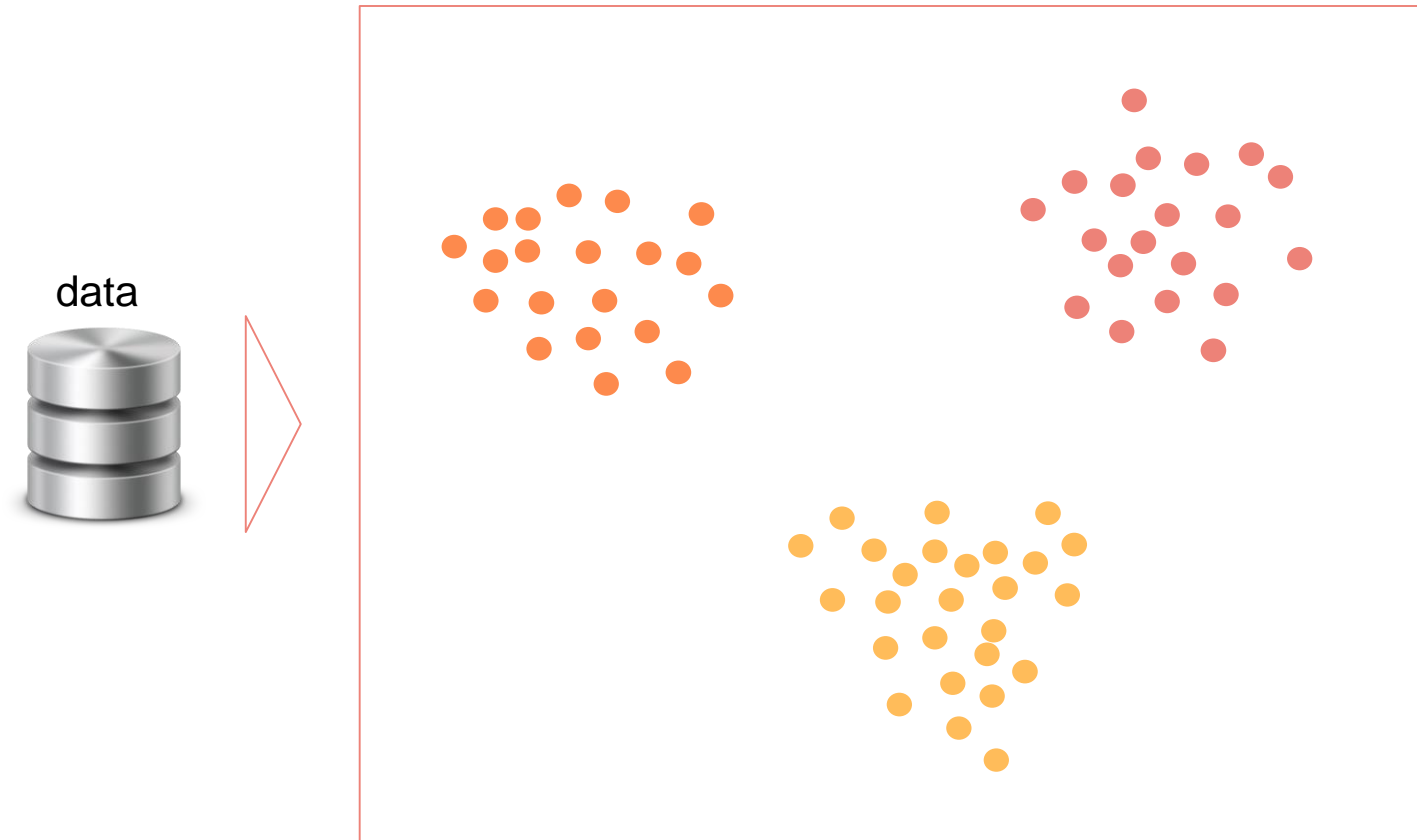
# Machine Learning: learning from data



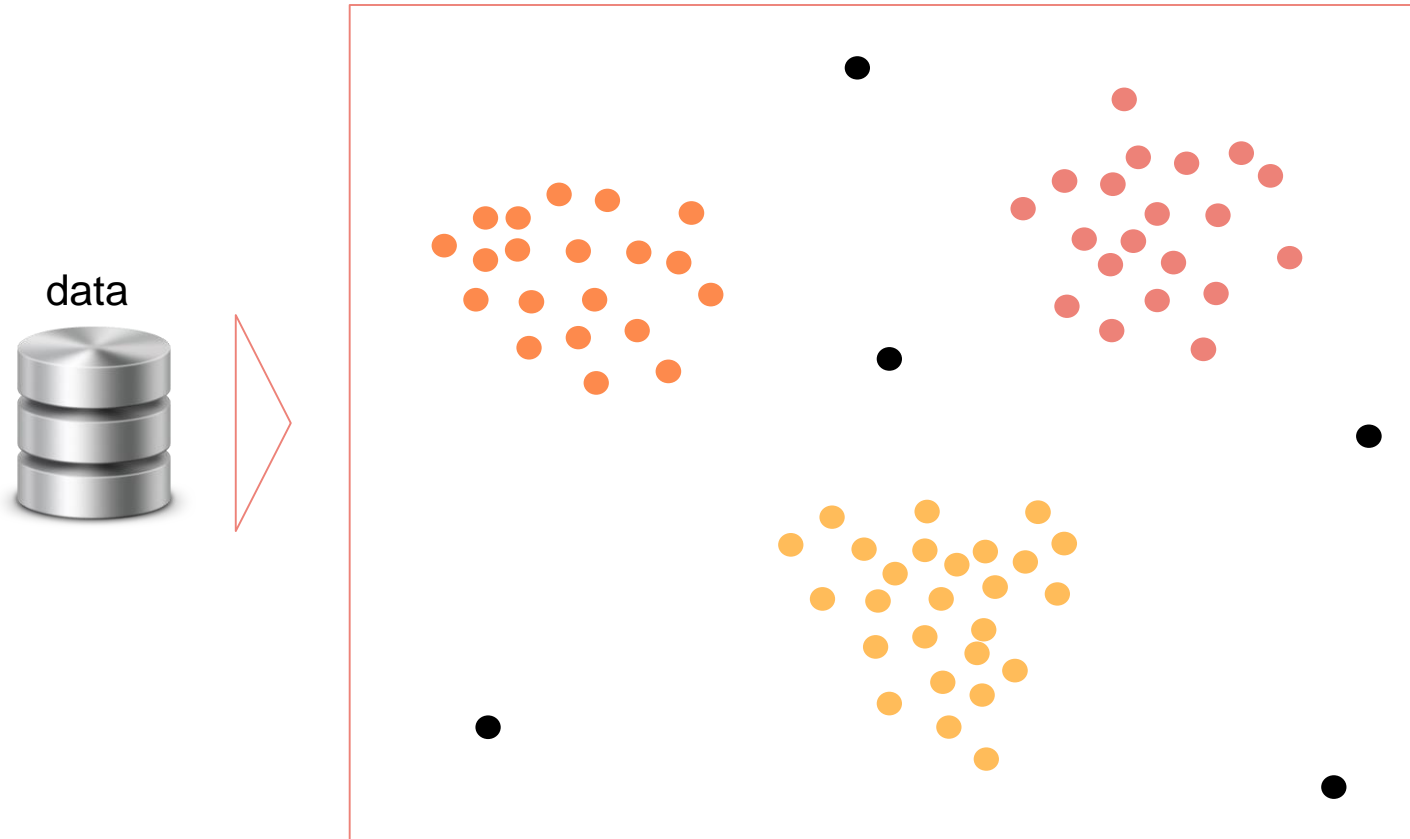
# Unsupervised Machine Learning: learning similarities



# Unsupervised Machine Learning: Anomaly Detection



# Unsupervised Machine Learning: Anomaly Detection

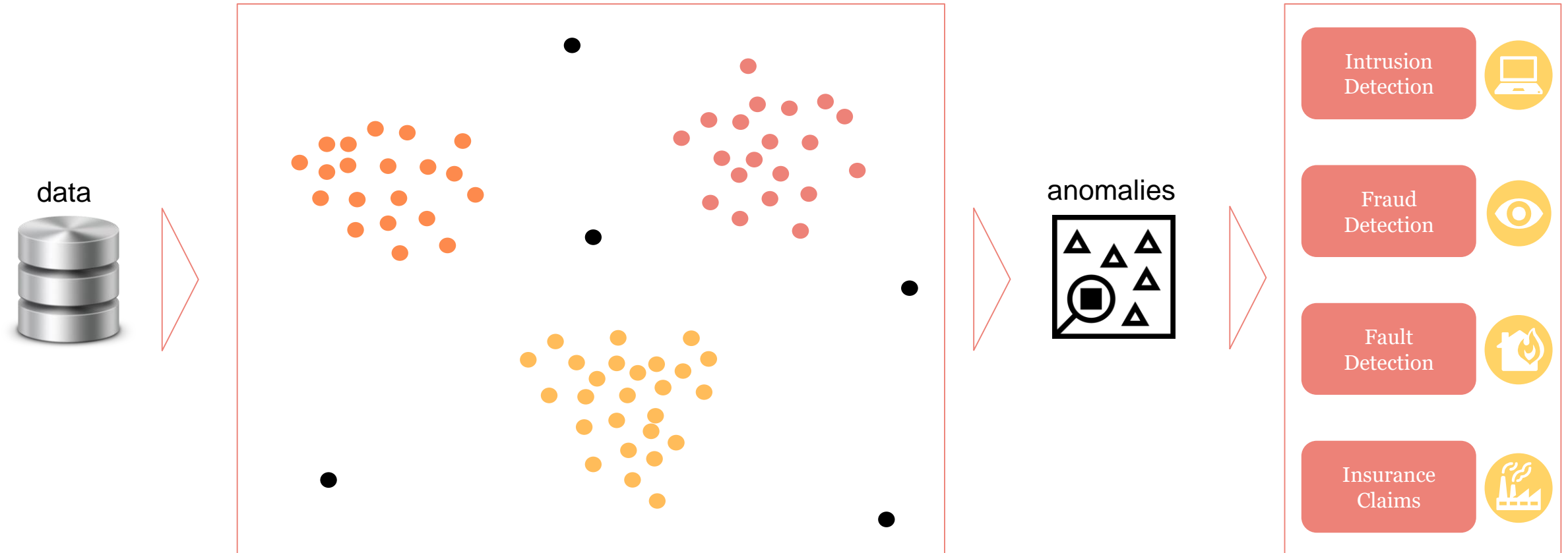


# Unsupervised Machine Learning: Anomaly Detection



«An anomaly is an observation which deviates so much from the other observations as to arouse suspicions that it was generated by a different mechanism»

Eugene Nathaniel Butler

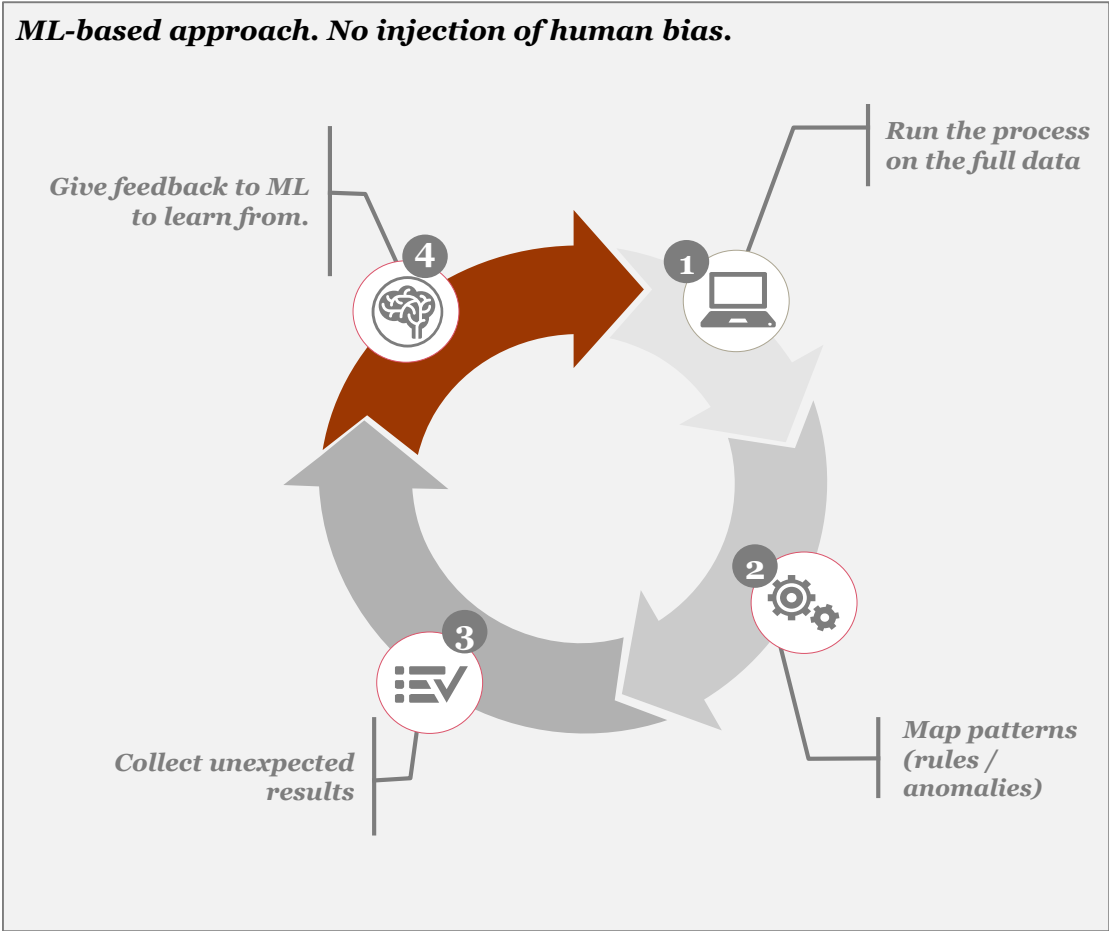
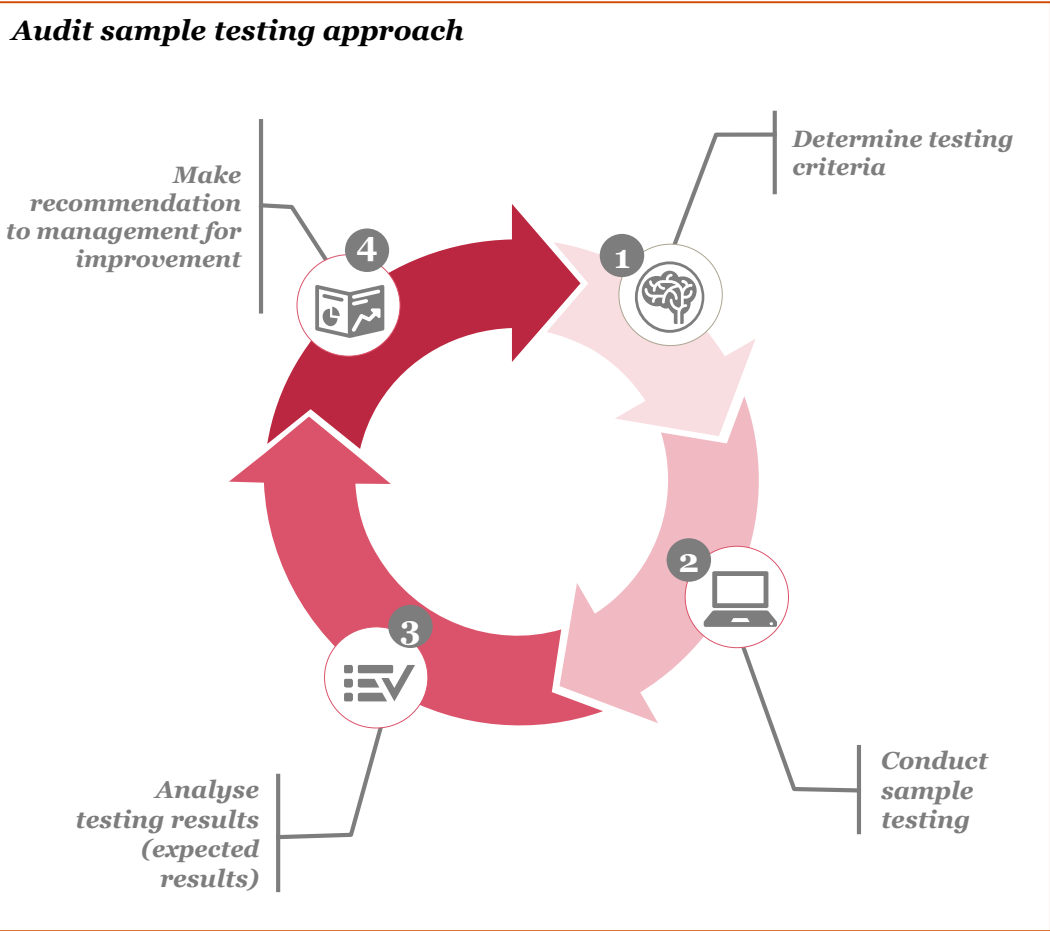


2

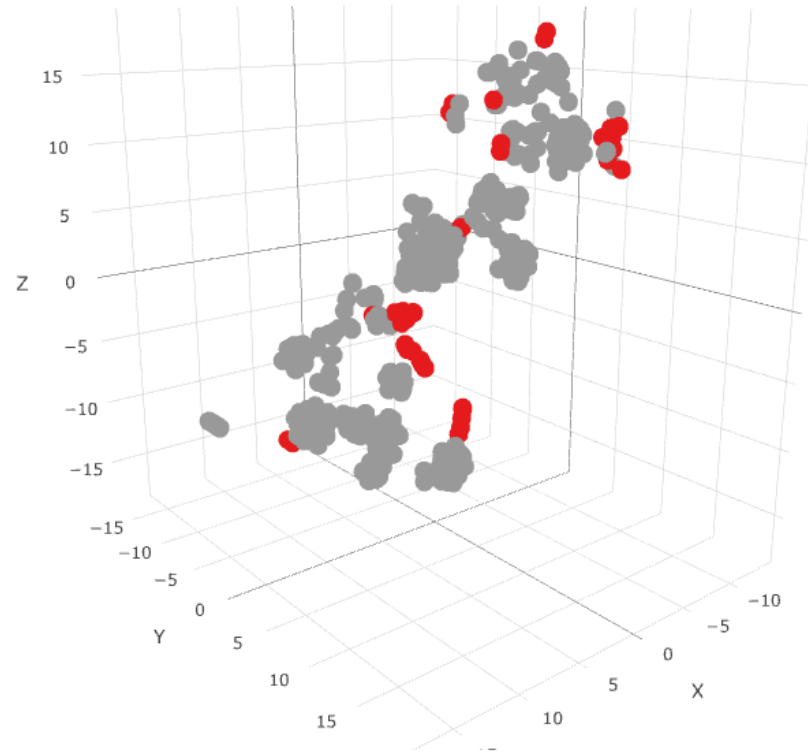
## Machine Learning & Anomaly Detection for Internal Audit



# Audit & ML-based approaches are complementary



# PwC Ada - Live Demo



Access Ada dashboard and visualize the results:

# Thank you

[pwc.com](https://www.pwc.com)

© 2018 PwC. All rights reserved. Not for further distribution without the permission of PwC. “PwC” refers to the network of member firms of PricewaterhouseCoopers International Limited (PwCIL), or, as the context requires, individual member firms of the PwC network. Each member firm is a separate legal entity and does not act as agent of PwCIL or any other member firm. PwCIL does not provide any services to clients. PwCIL is not responsible or liable for the acts or omissions of any of its member firms nor can it control the exercise of their professional judgment or bind them in any way. No member firm is responsible or liable for the acts or omissions of any other member firm nor can it control the exercise of another member firm’s professional judgment or bind another member firm or PwCIL in any way.