Data science and data mining

ارائه دهندگان:
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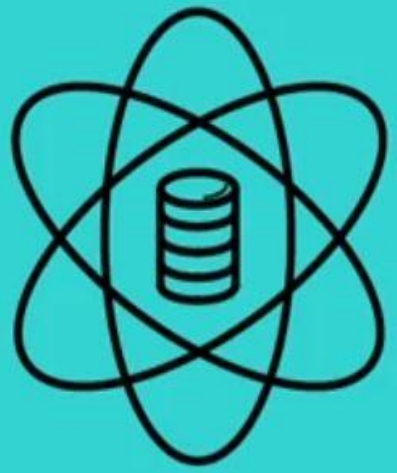
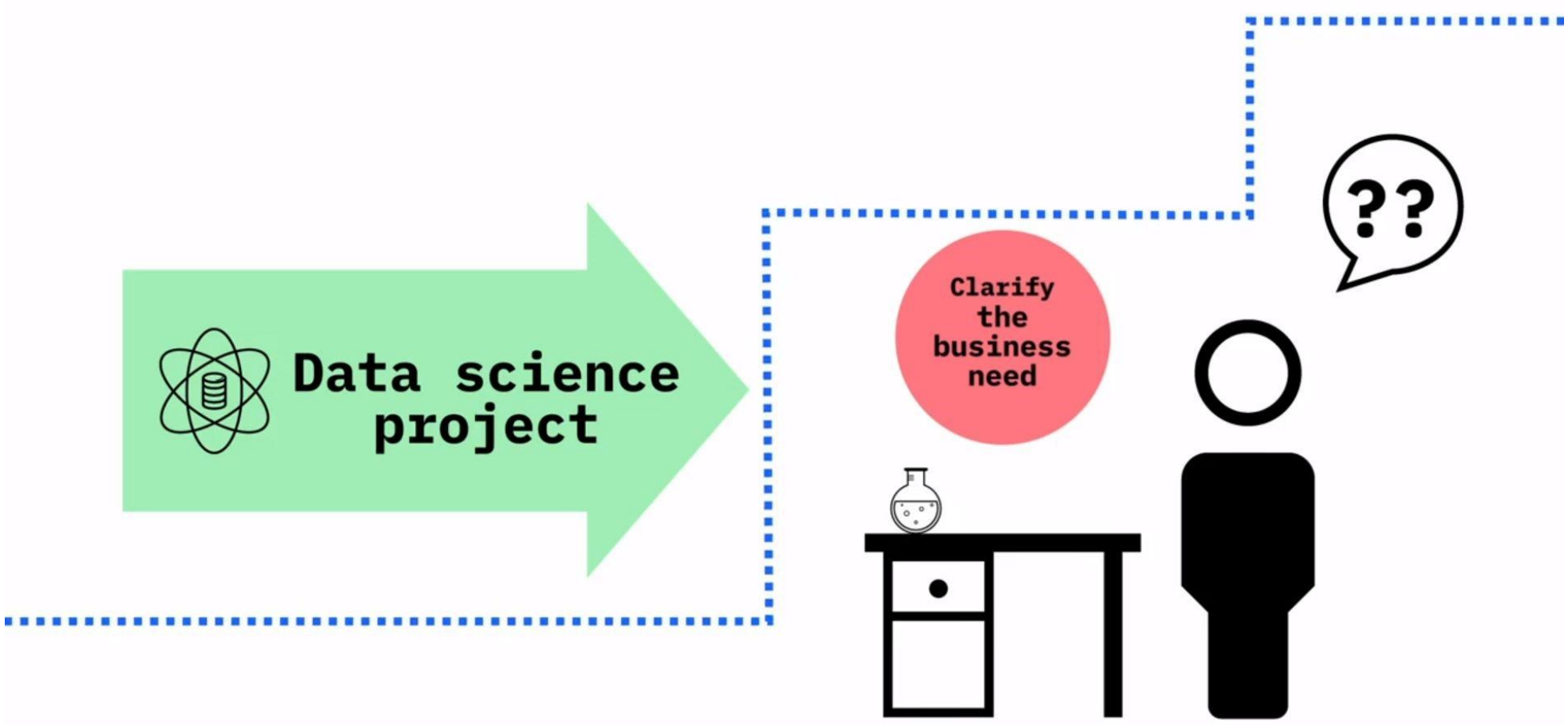
فاطمه مهدوی گلوجه-960207862
درس آزمایشگاه پایگاه داده ها
استاد راهنما:
استاد الهام رشید مهرآبادی

Data Science
can help organizations:

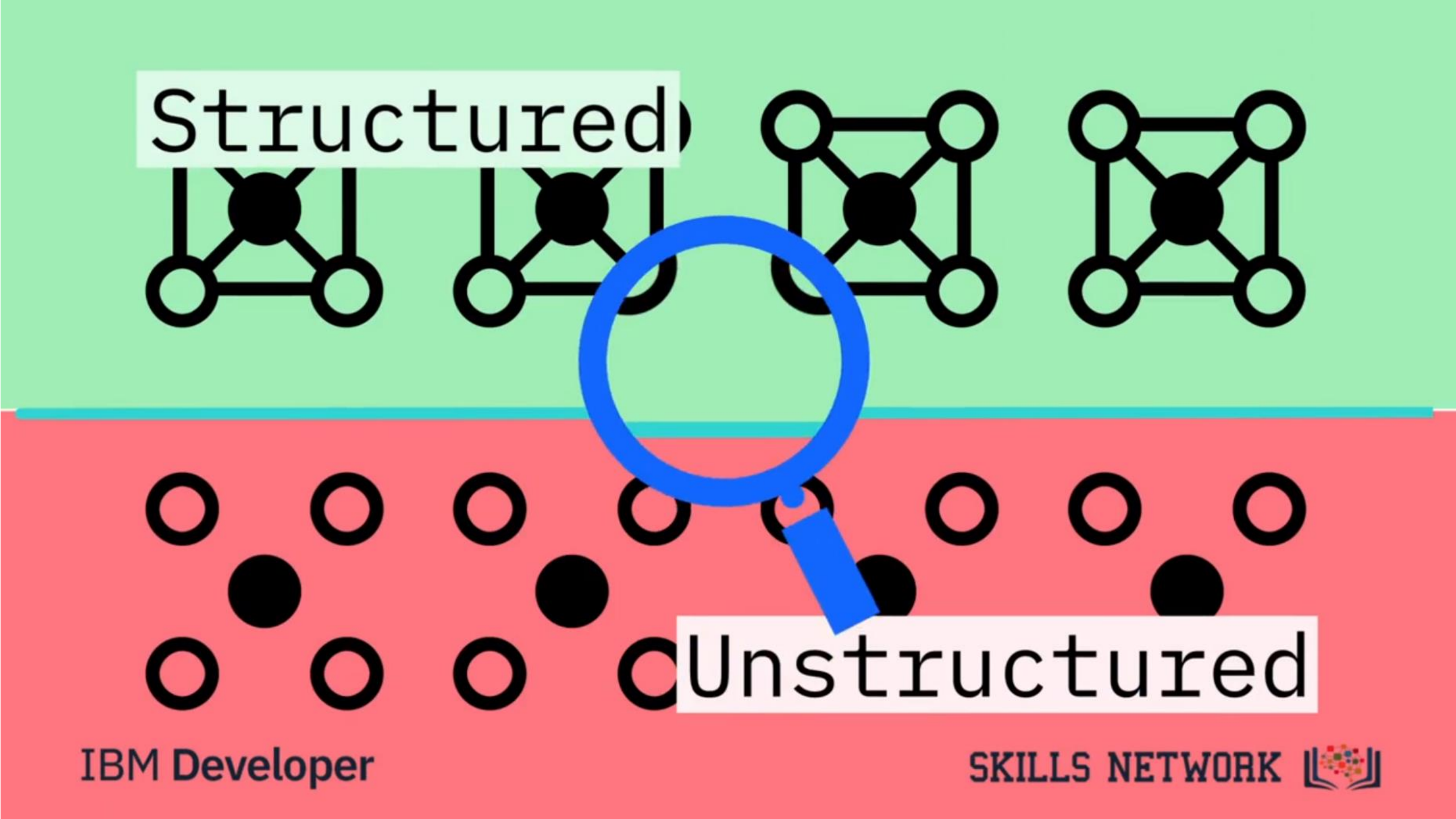


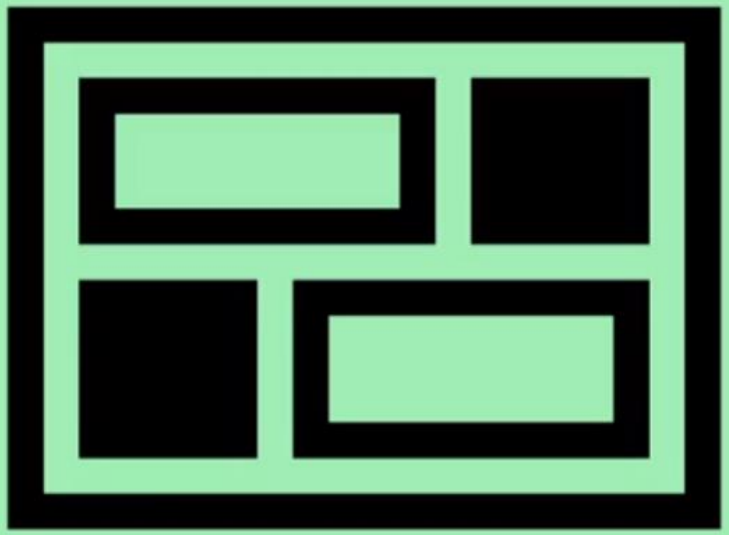
- Understand their environments
- Analyze existing issues
- Reveal previously hidden opportunities

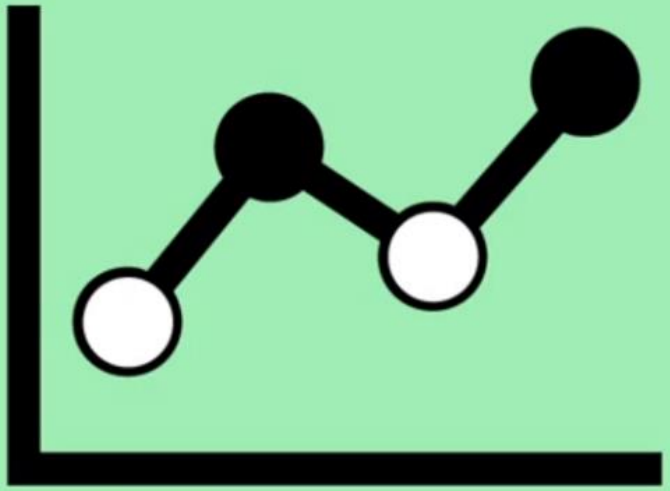

Data science project
Clarify the business need
??

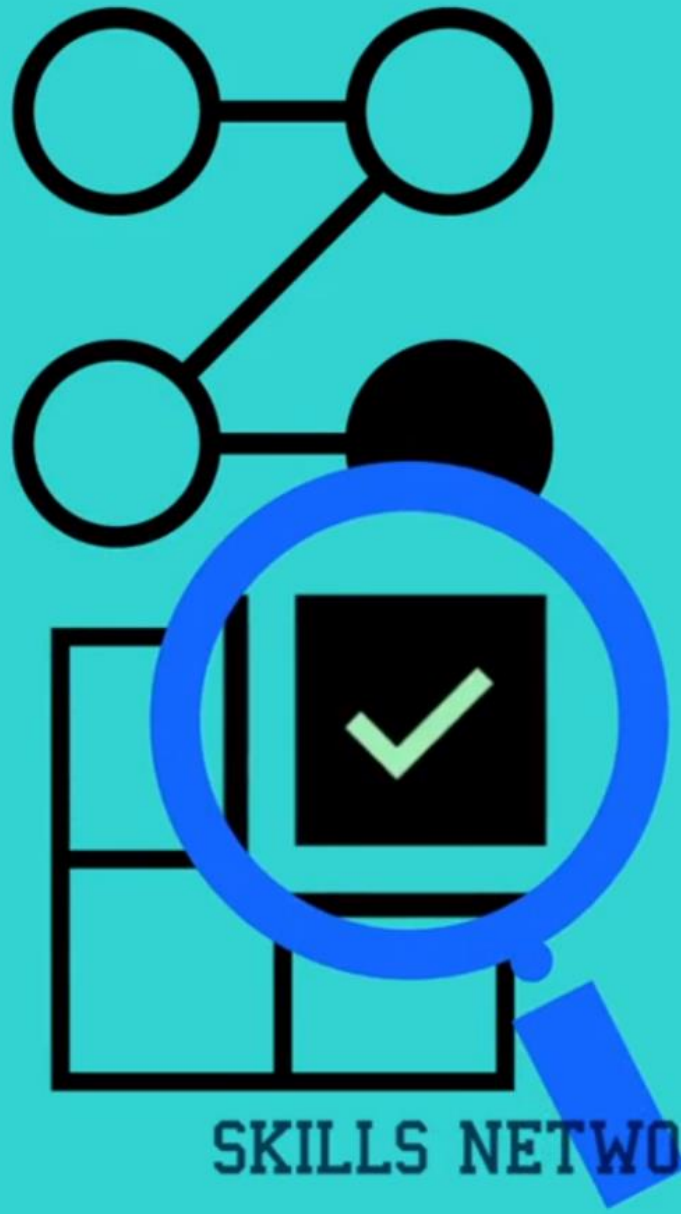
What data do we need to solve the problem?

Where will that data come from?


Structured
Unstructured
IBM Developer
SKILLS NETWORK







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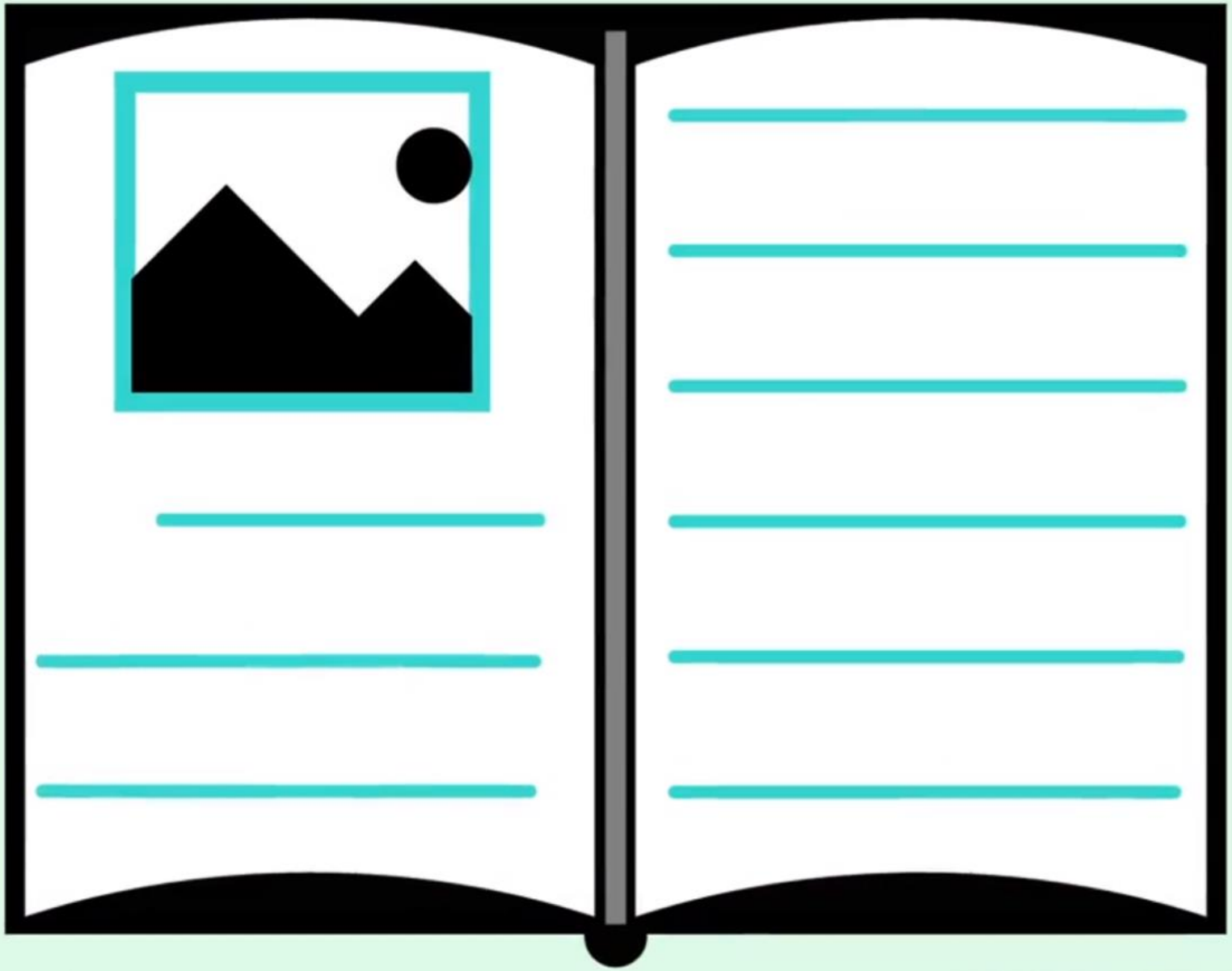


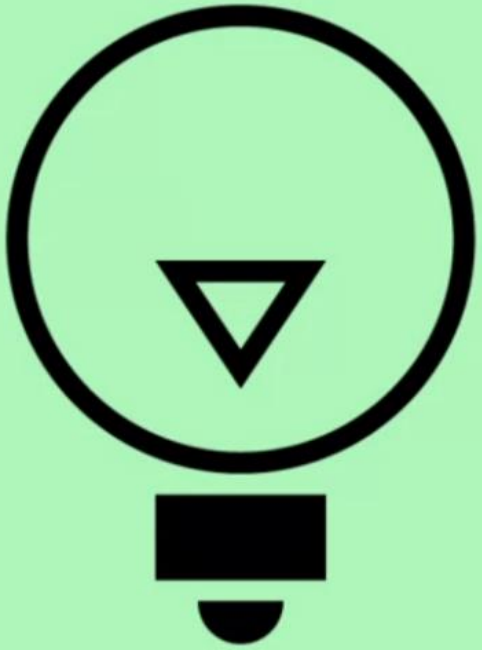
Powerful data visualization tools

Understand the nature of the results

Recommended action to take

Data Science is changing:

- The way we work
- The way we use data
- Our approach to the world



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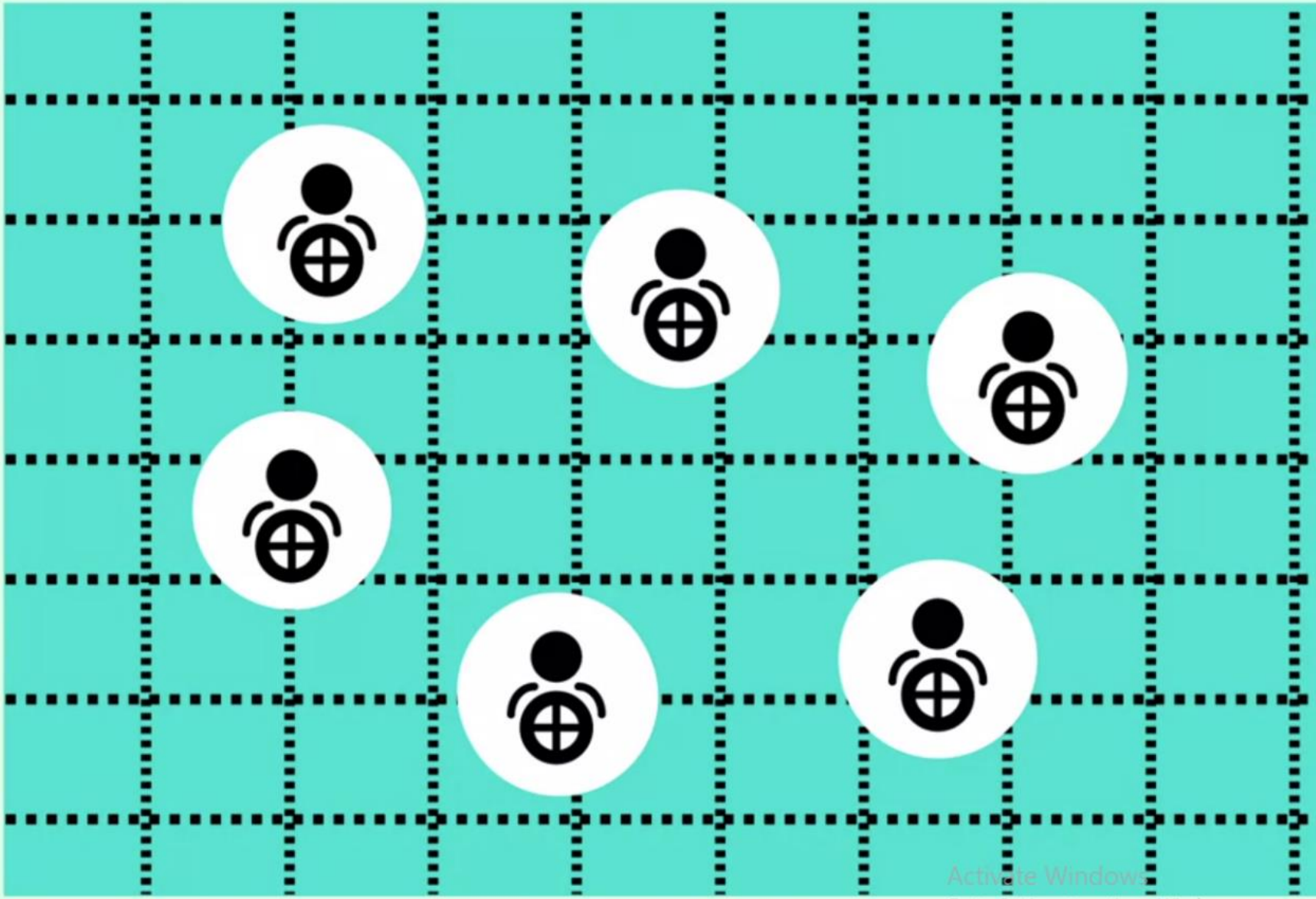
Activate Windows
Go to Settings to activate Windows.

Uber



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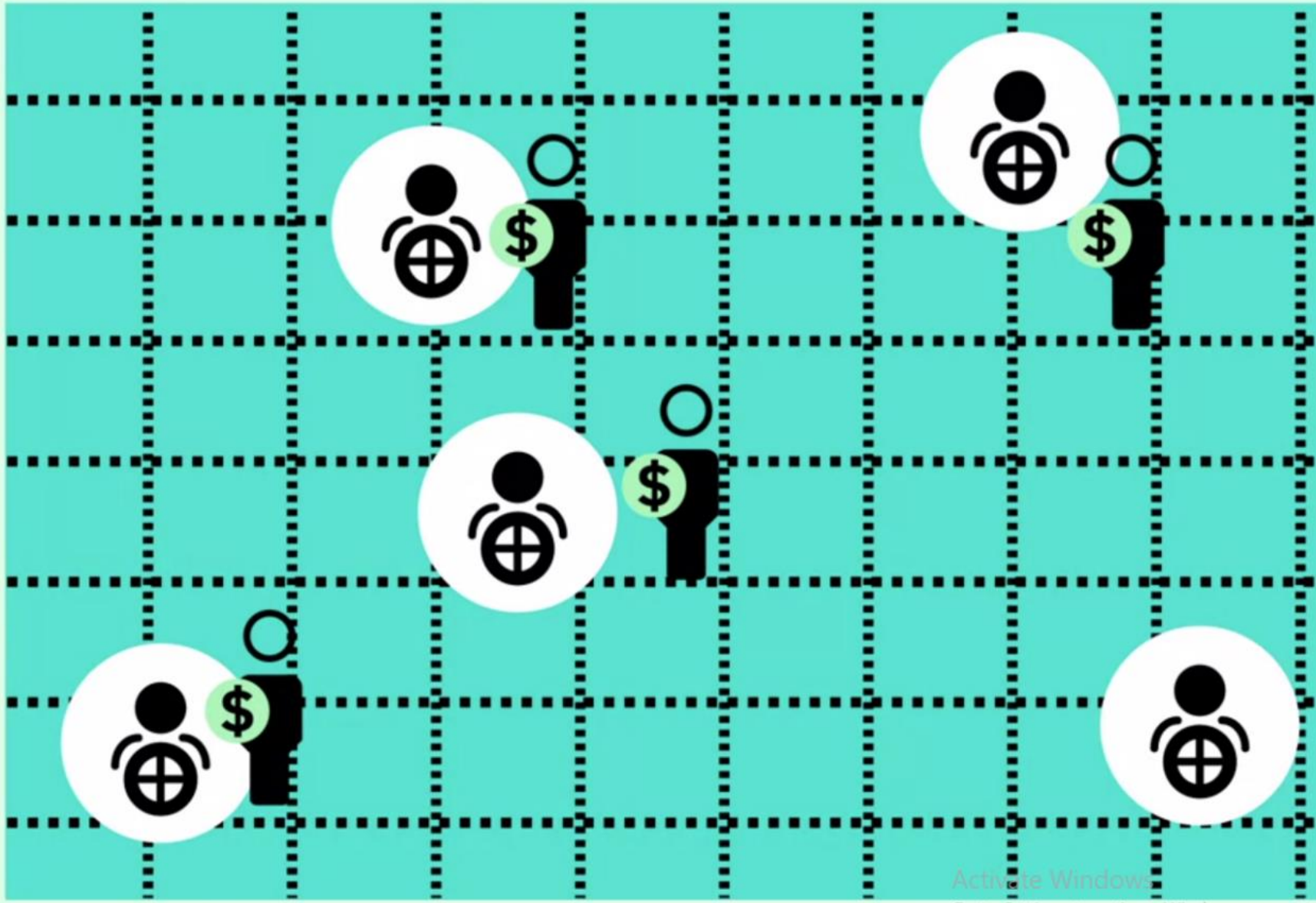
Uber



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Cyanobacterial blooms

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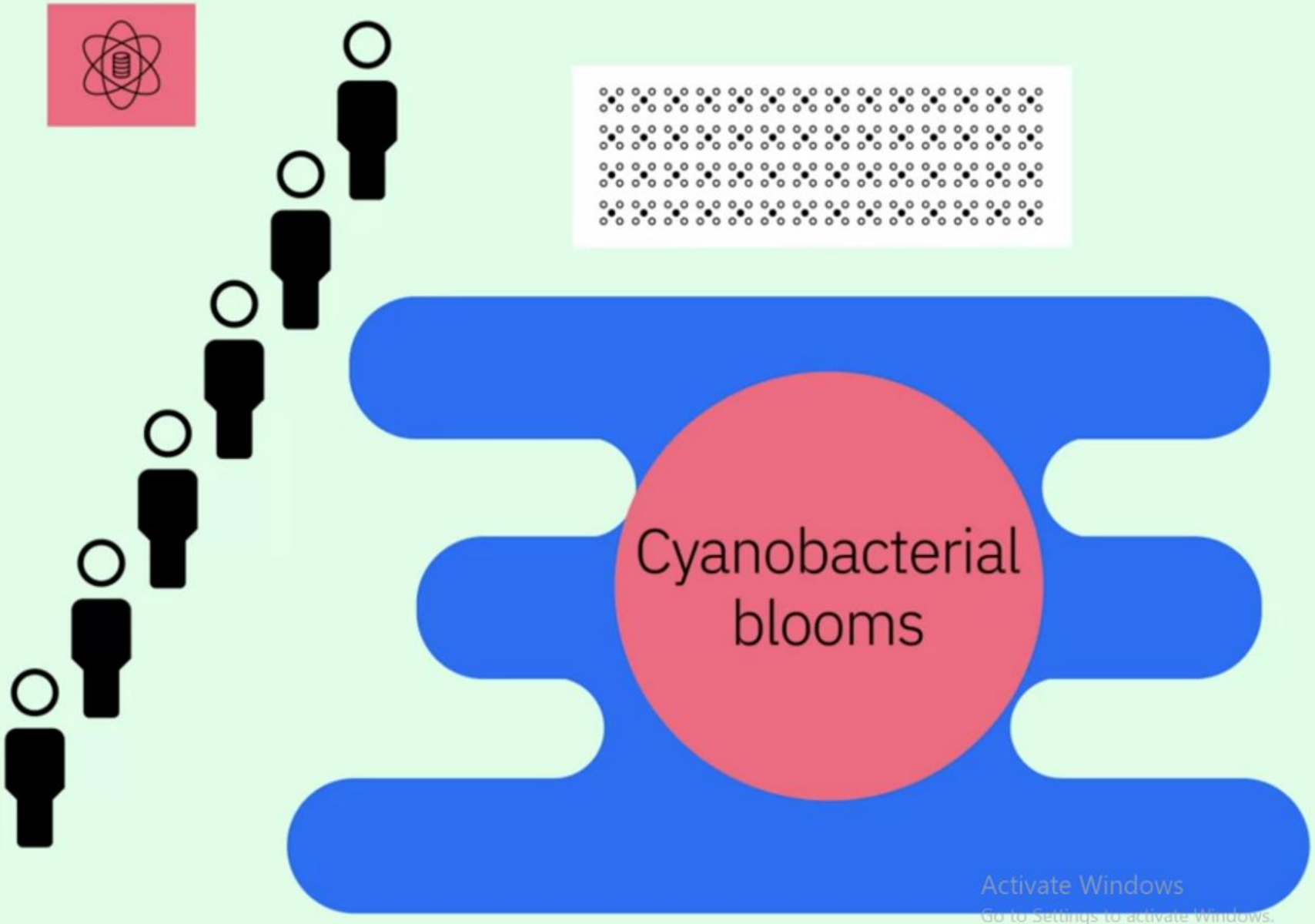
Physical

Chemical

Biological



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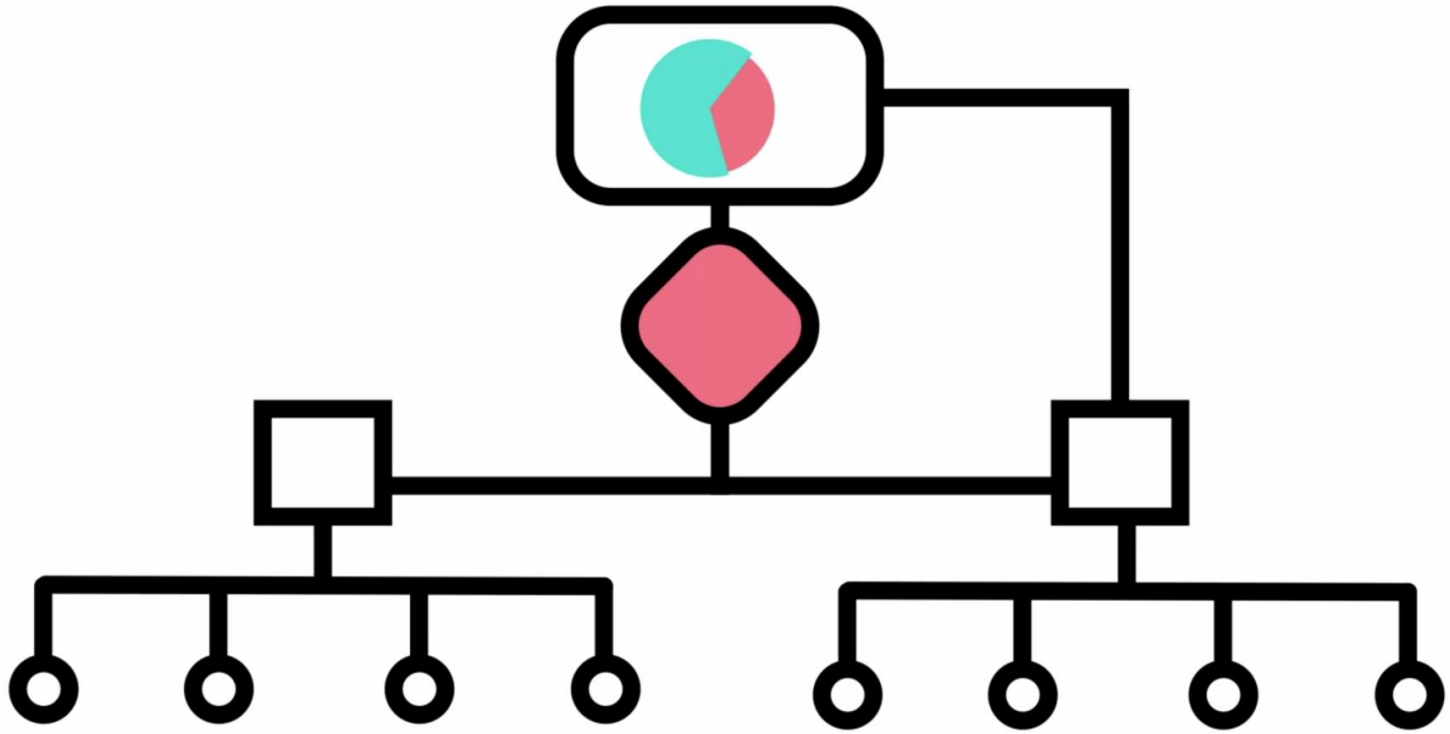

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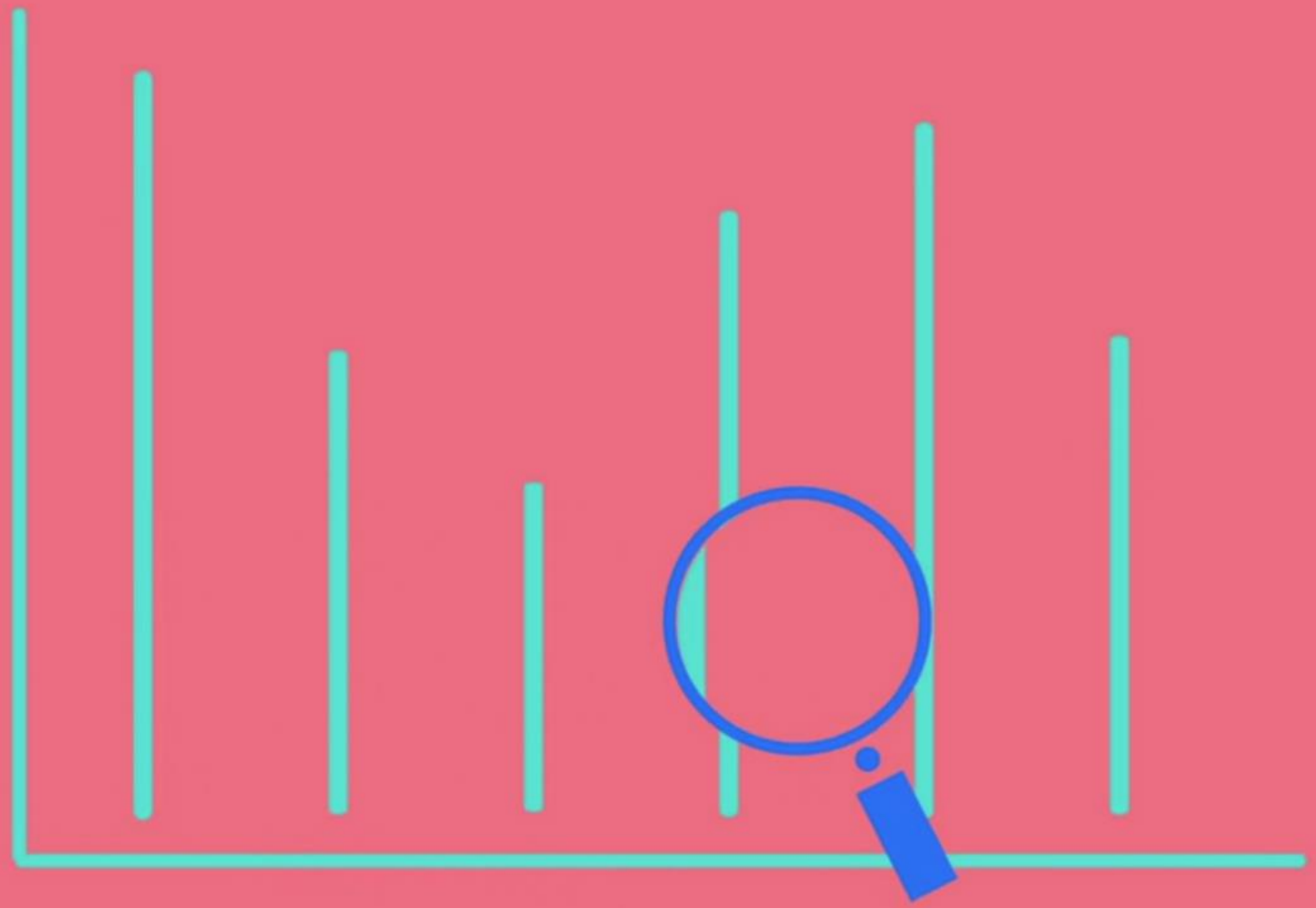

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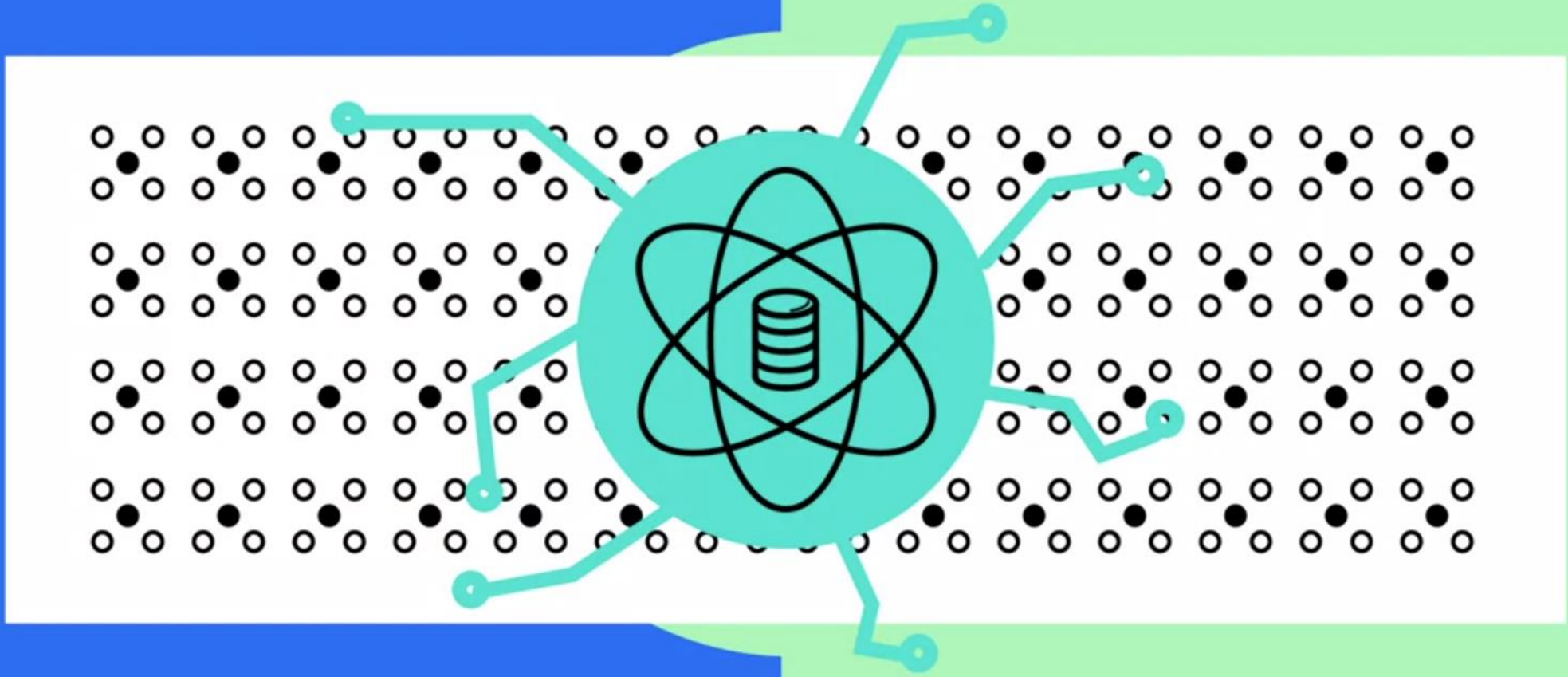

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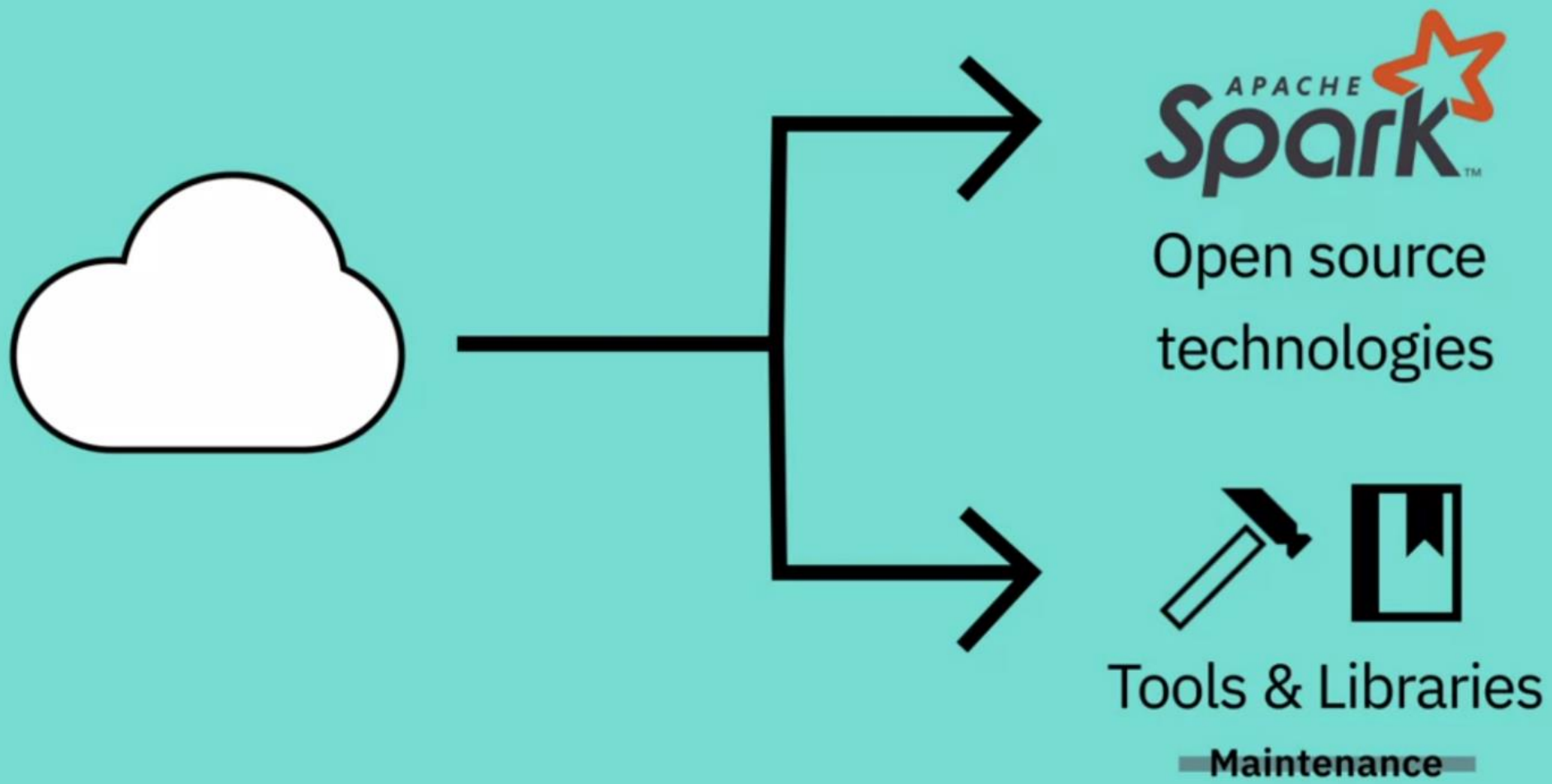

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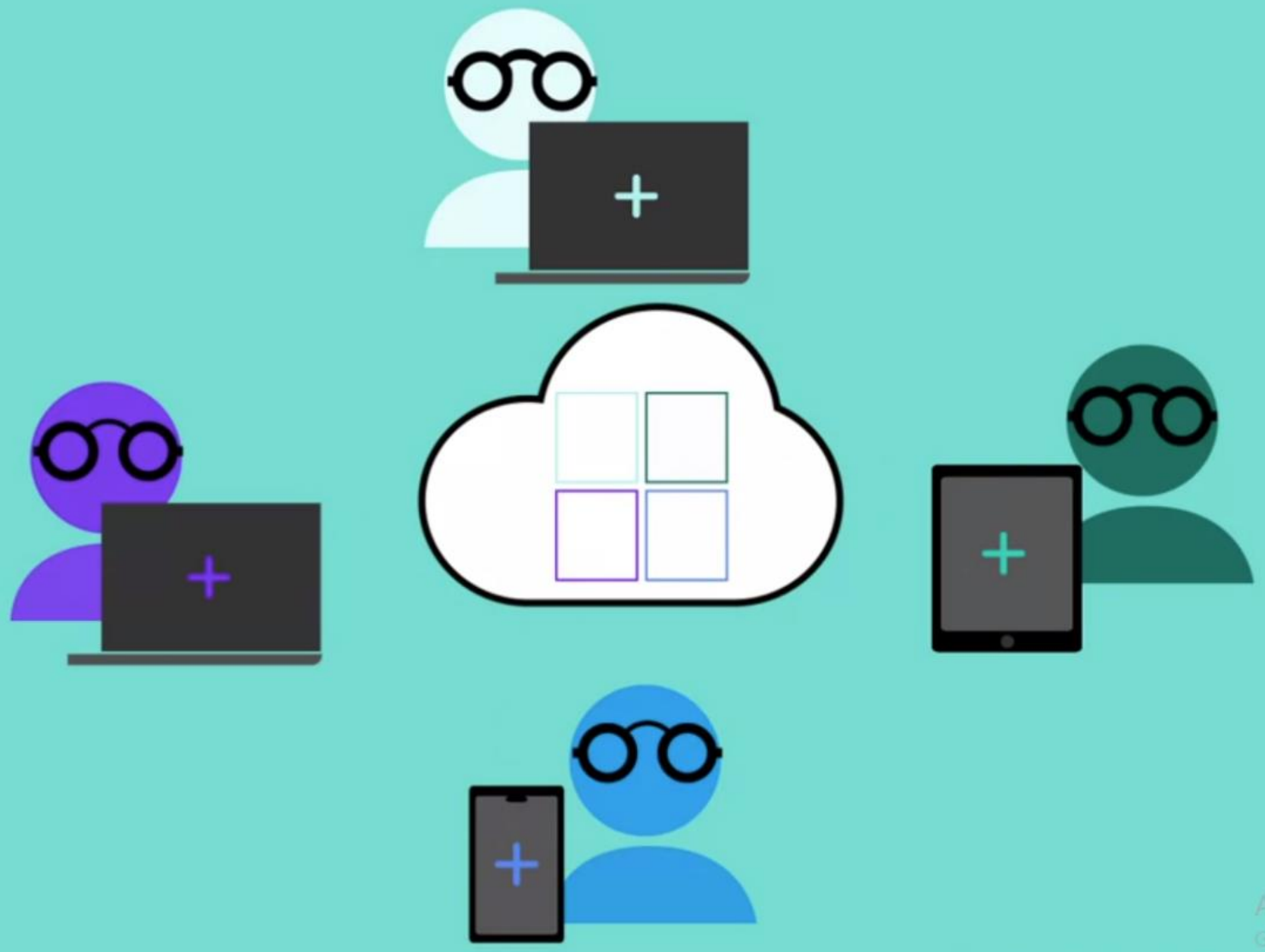

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Some big tech companies offer cloud platforms

Become familiar in a pre-built environment

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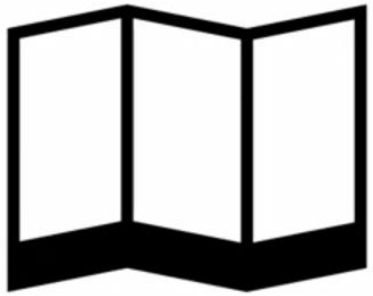
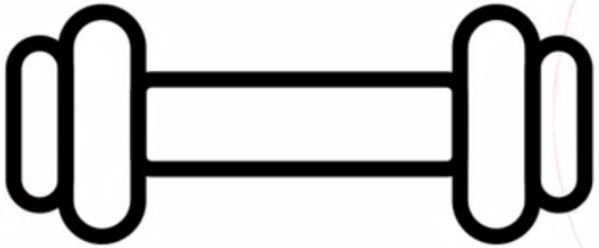
Foundations of Big Data





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Foundations of Big Data

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Big Data

"Big Data refers to the dynamic, large and disparate volumes of data being created by people, tools, and machines. It requires new, innovative, and scalable technology to collect, host, and analytically process the vast amount of data gathered in order to derive real-time business insights that relate to consumers, risk, profit, performance, productivity management, and enhanced shareholder value."

Ernst and Young

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The V's of Big Data

Velocity

Volume

Variety

Veracity

Value

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Velocity

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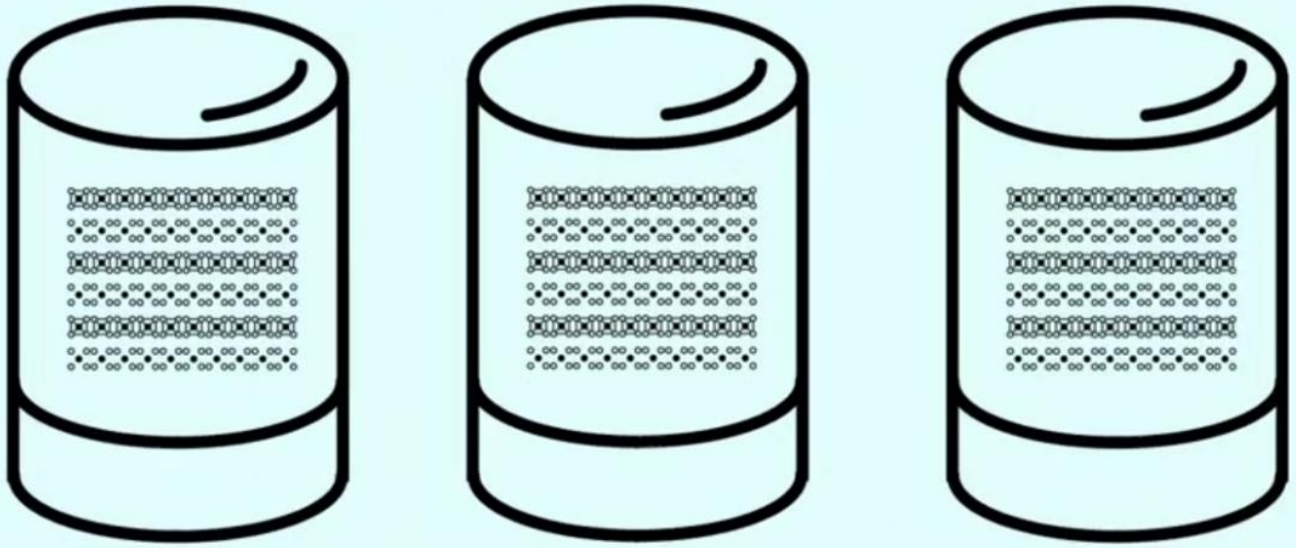
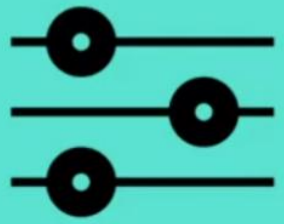
Volume





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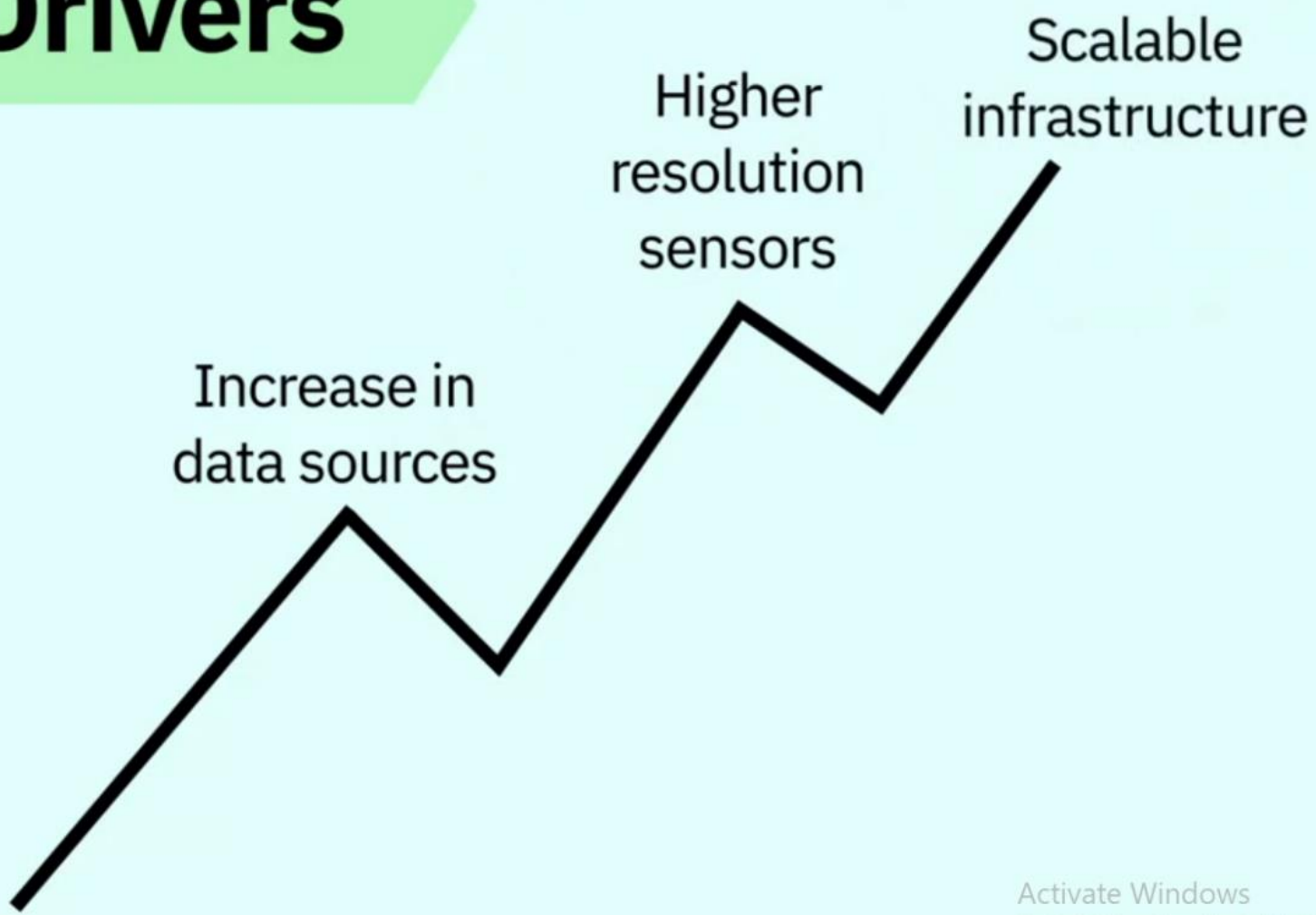
Volume

Drivers



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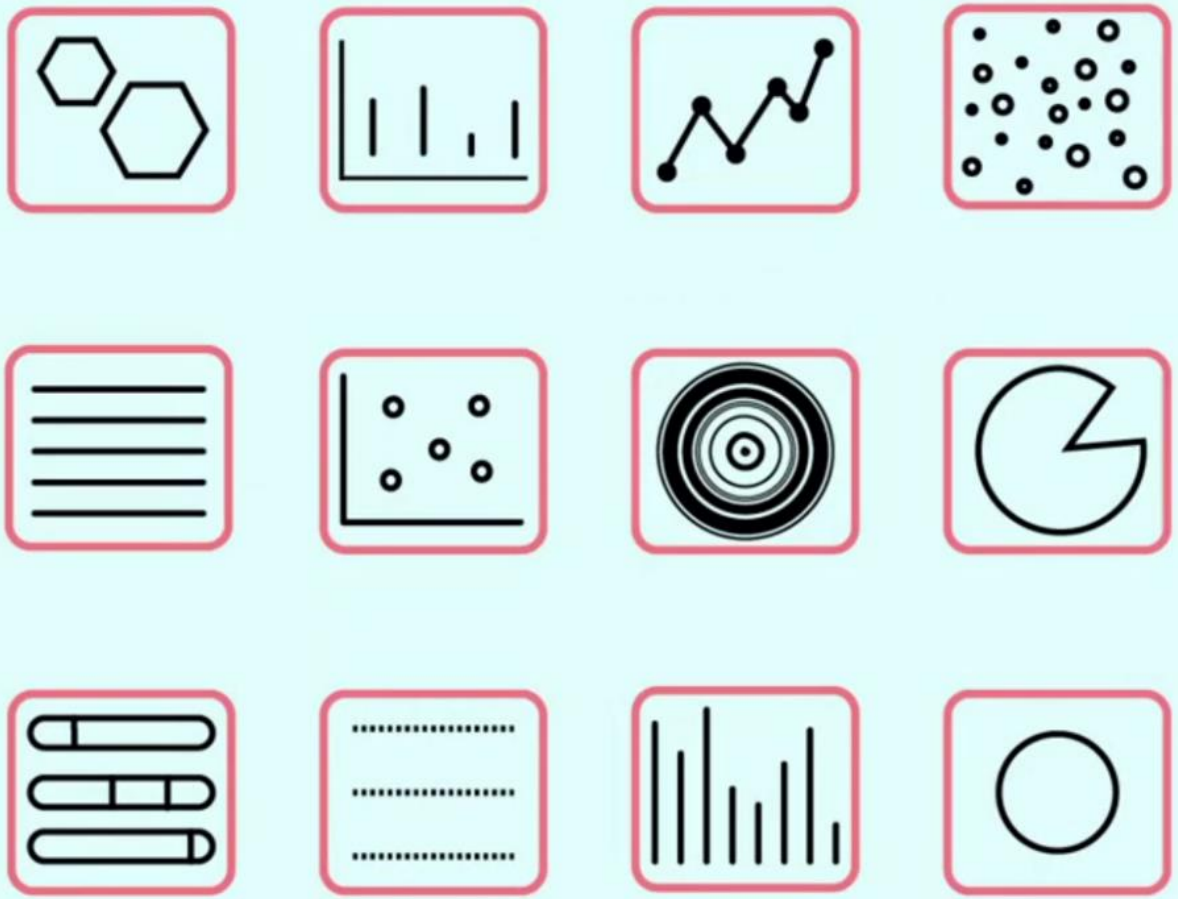
Variety



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Variety

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Variety

Drivers

- Mobile technologies
- Social media
- Wearable technologies
- Geo technologies
- Video
- Many more

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Veracity

Attributes

- Consistency
- Completeness
- Integrity
- Ambiguity

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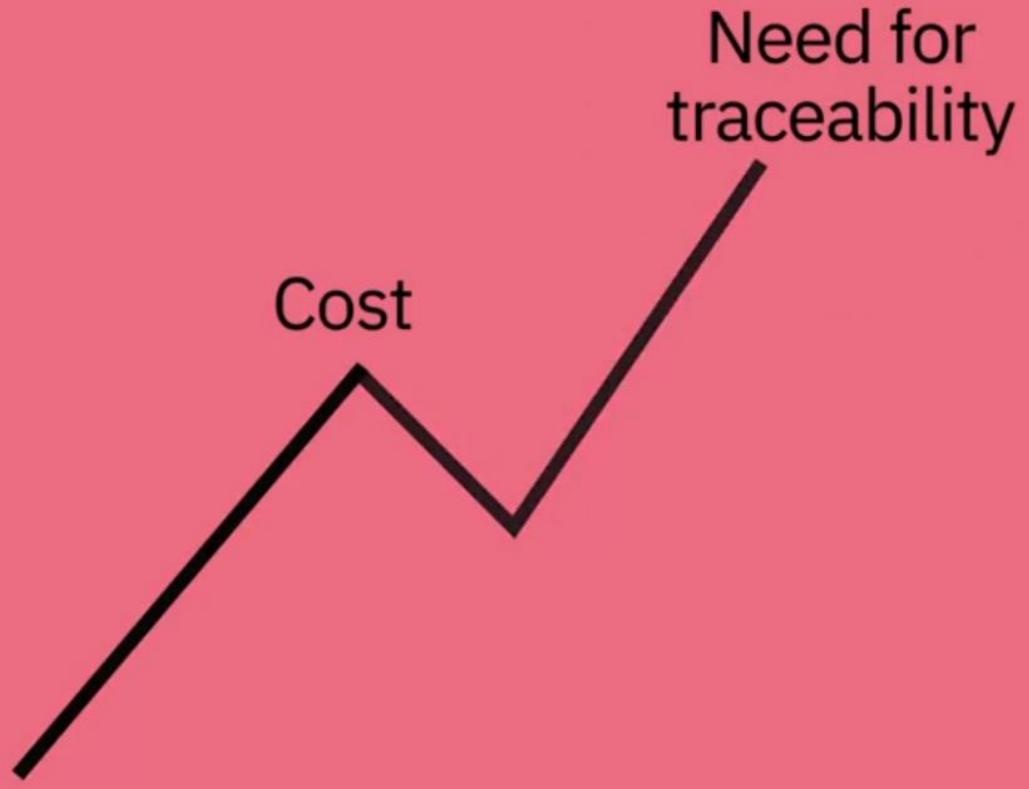
Veracity

Drivers



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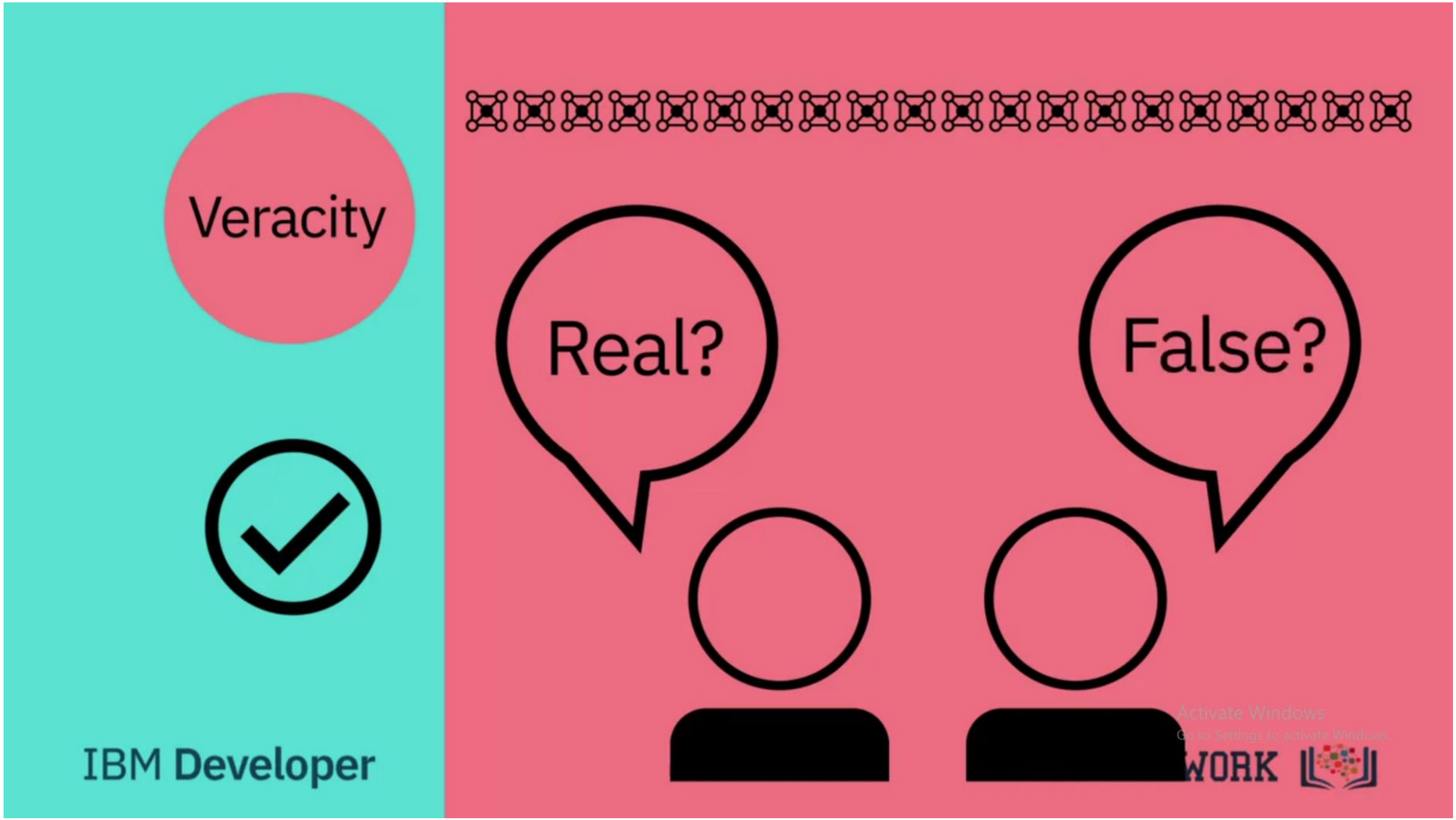
Veracity
Real?
False?
IBM Developer
Activate Windows
Go to Settings to activate Windows.
WORK

Value

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Value

Activate Windows
Go to Settings to activate Windows.

Value

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Activate Windows
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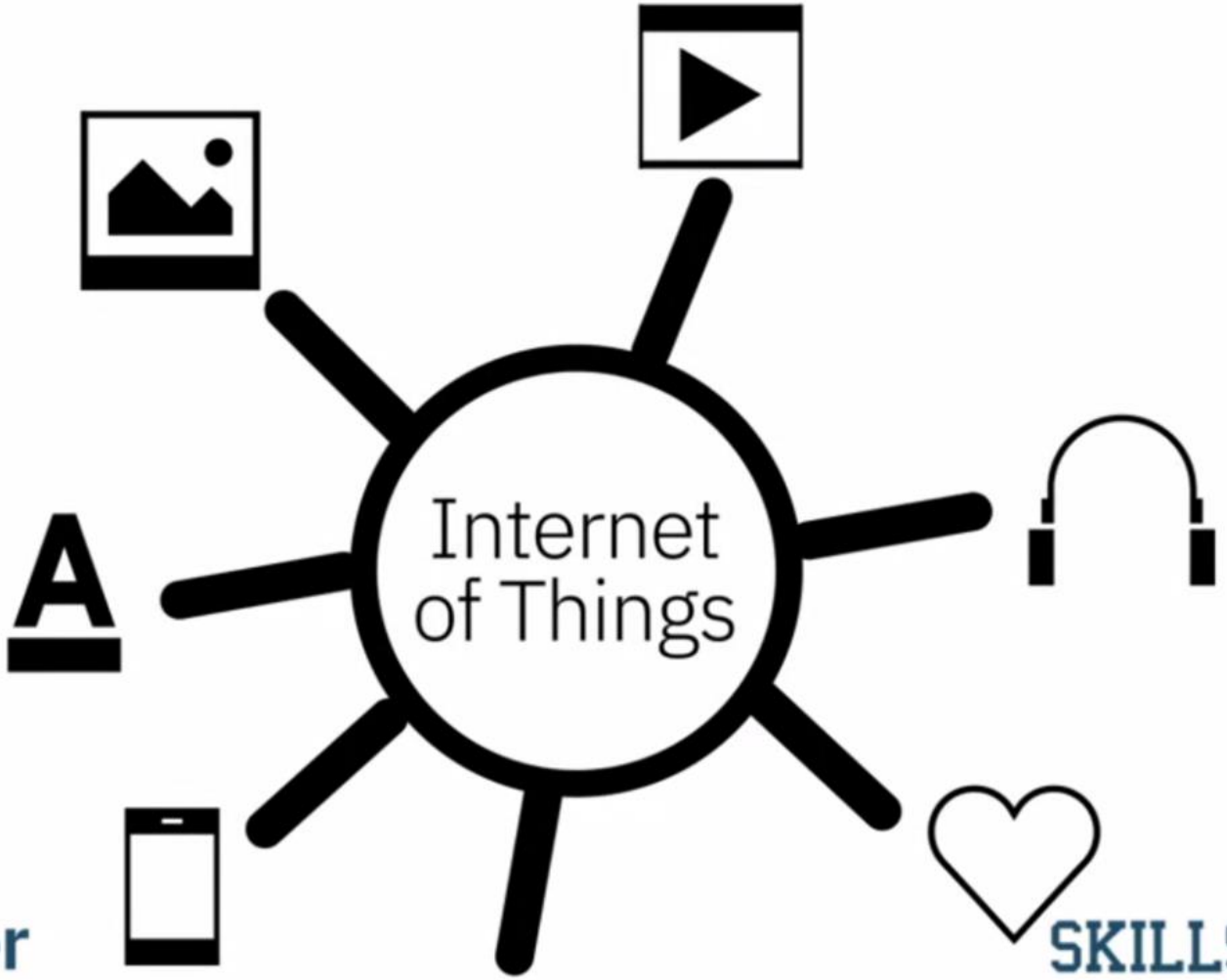
Velocity

2

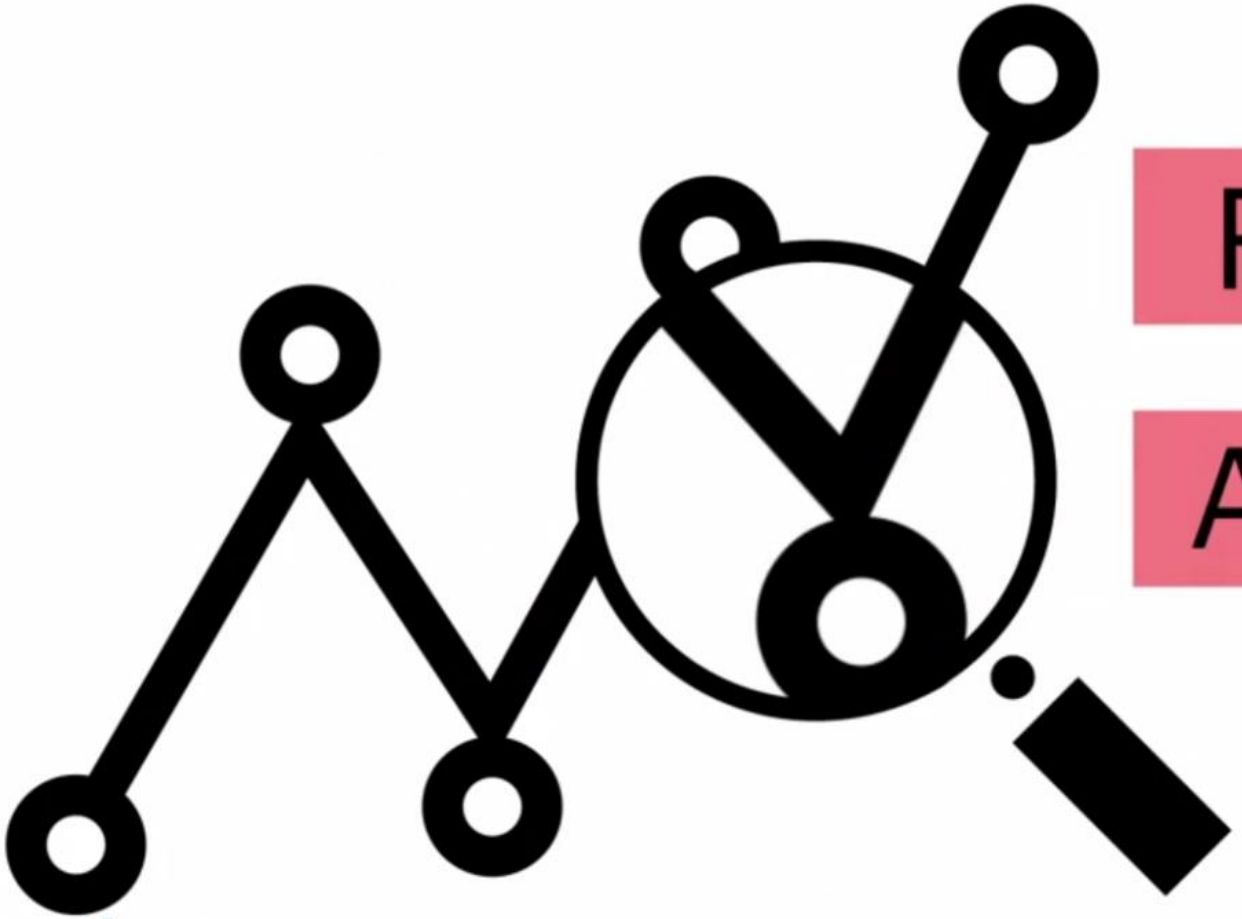
Volume

Volume

Variety



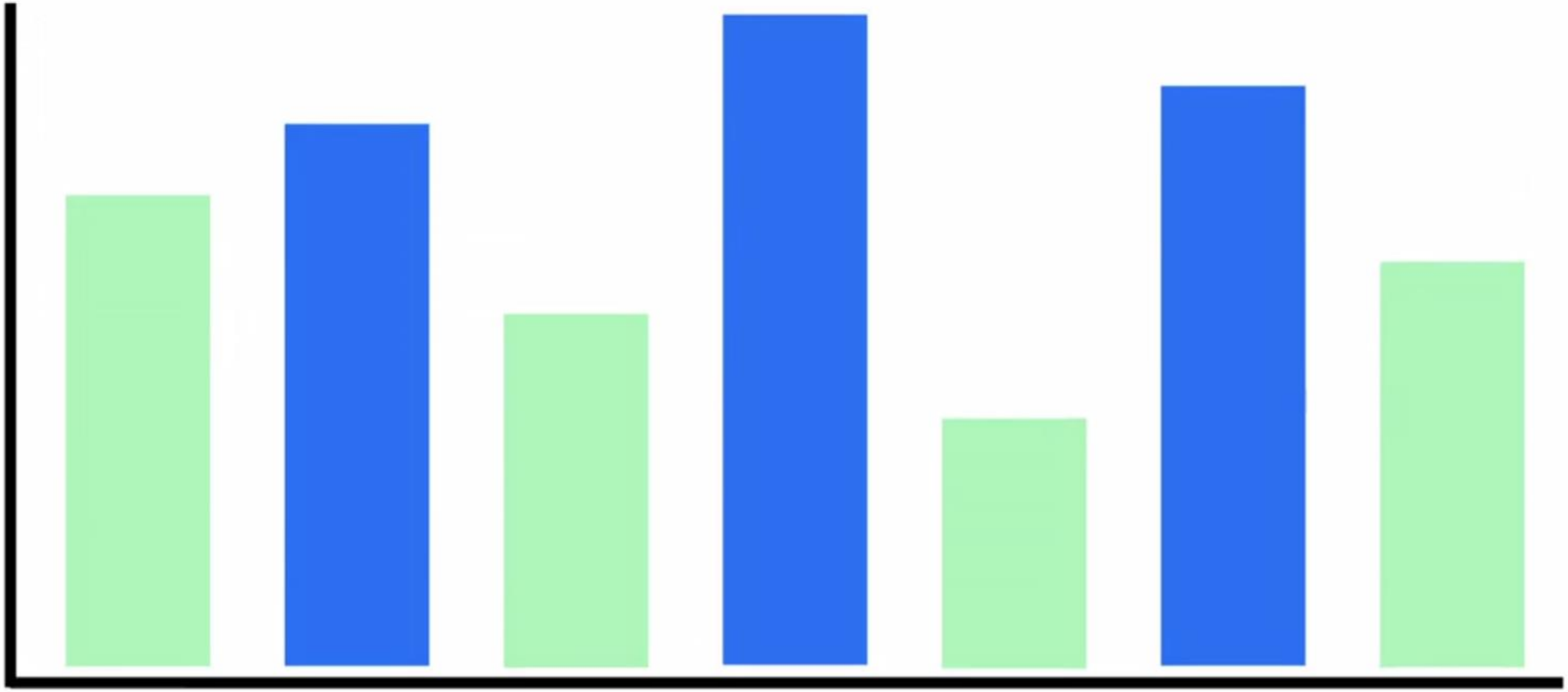
Veracity



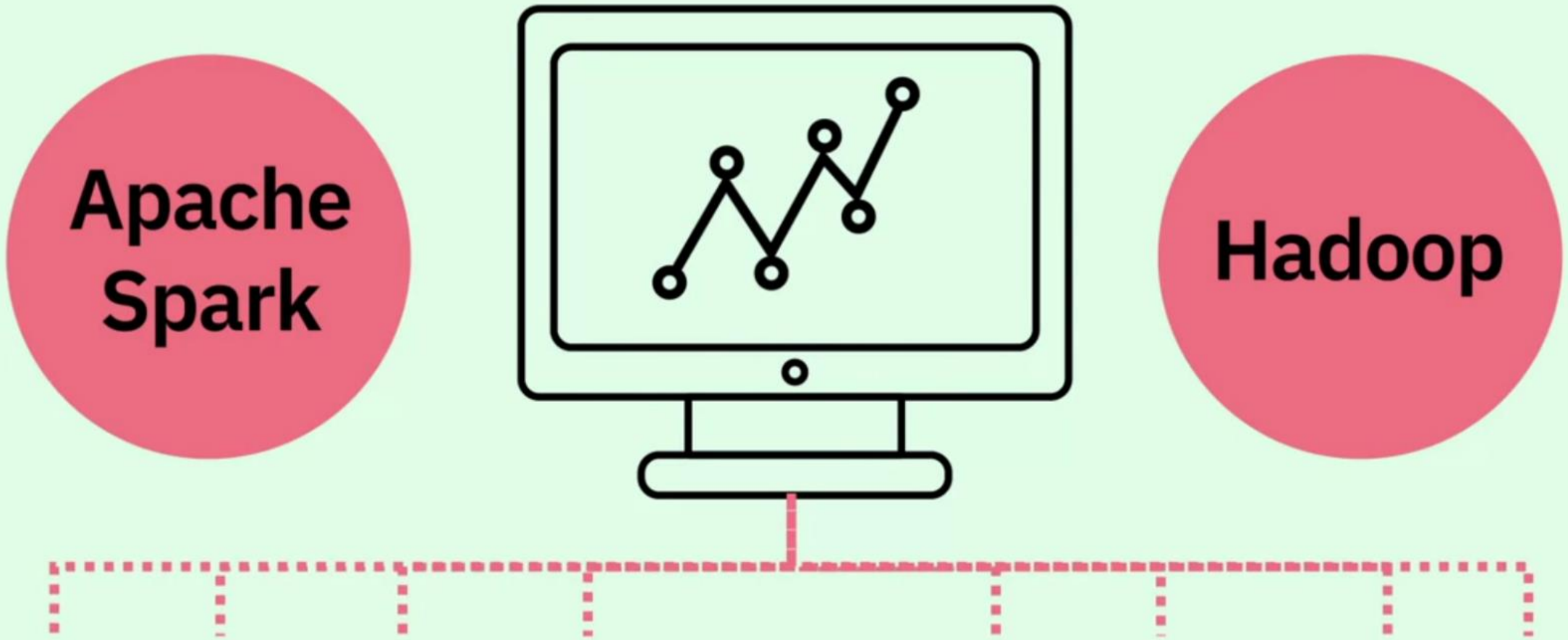
Reliable

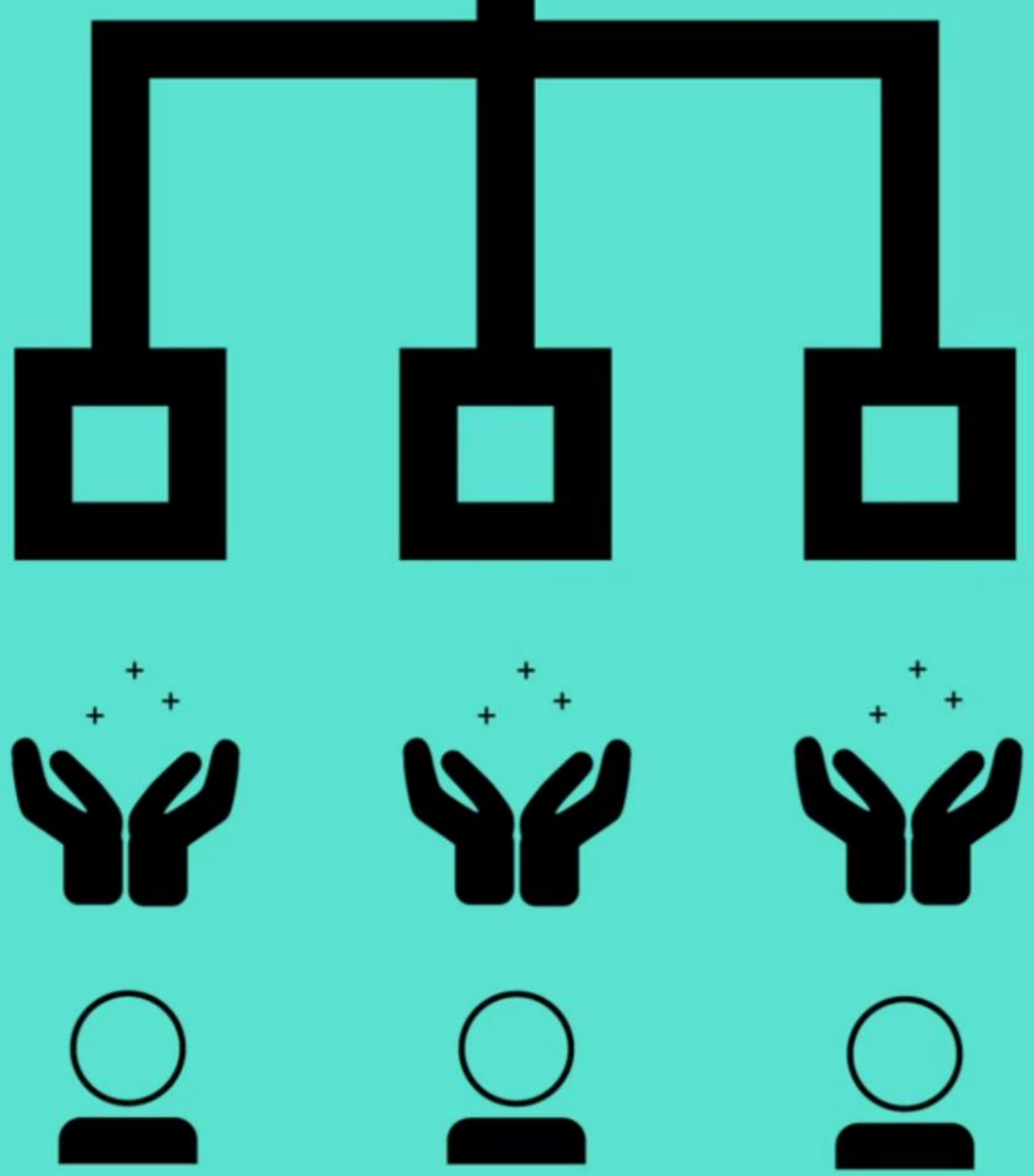
Accurate

Veracity



Alternative tools





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Netflix

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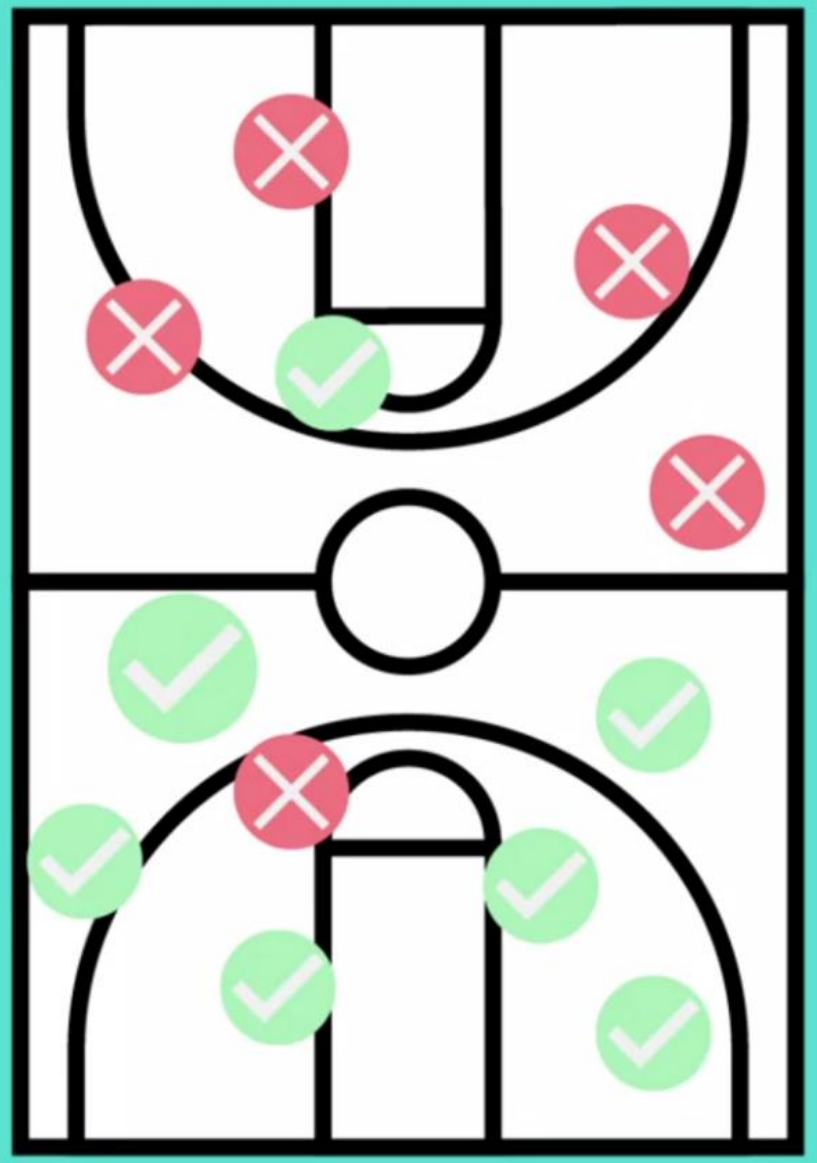

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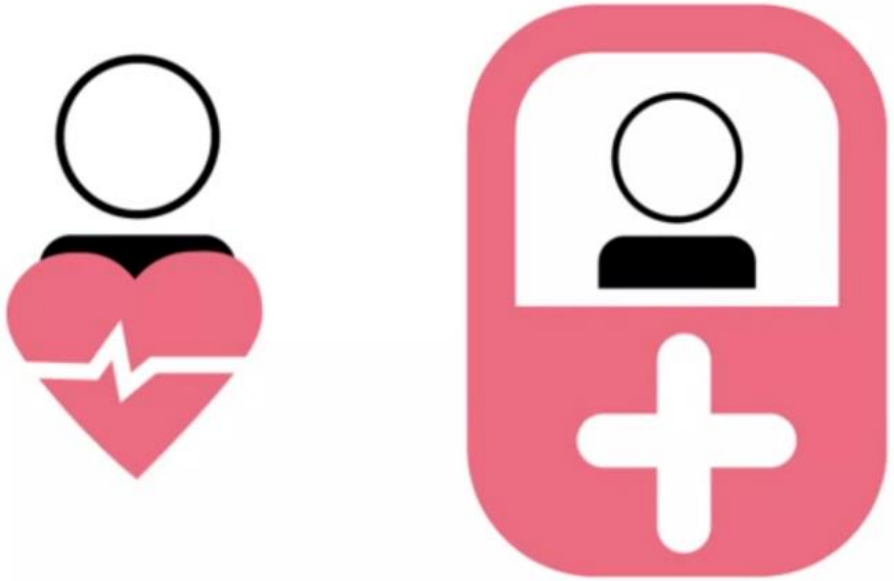
DexLab

A QUICK GUIDE TO DATA MINING

Data Science techniques



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Data Science in Healthcare

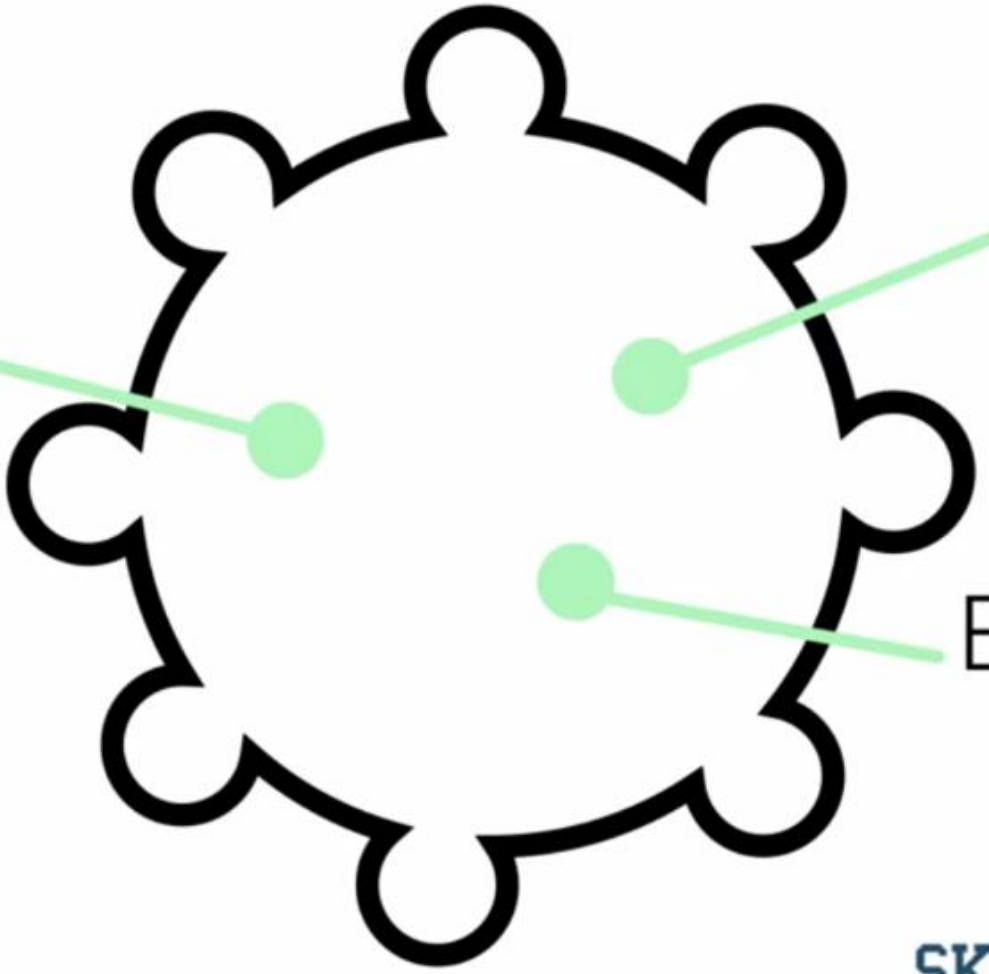
Data mining

Data modeling

Statistics

Machine learning

Data Science in Healthcare



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Data Science in Healthcare

- Appropriate tests
- Suitable trials
- Suggested treatments

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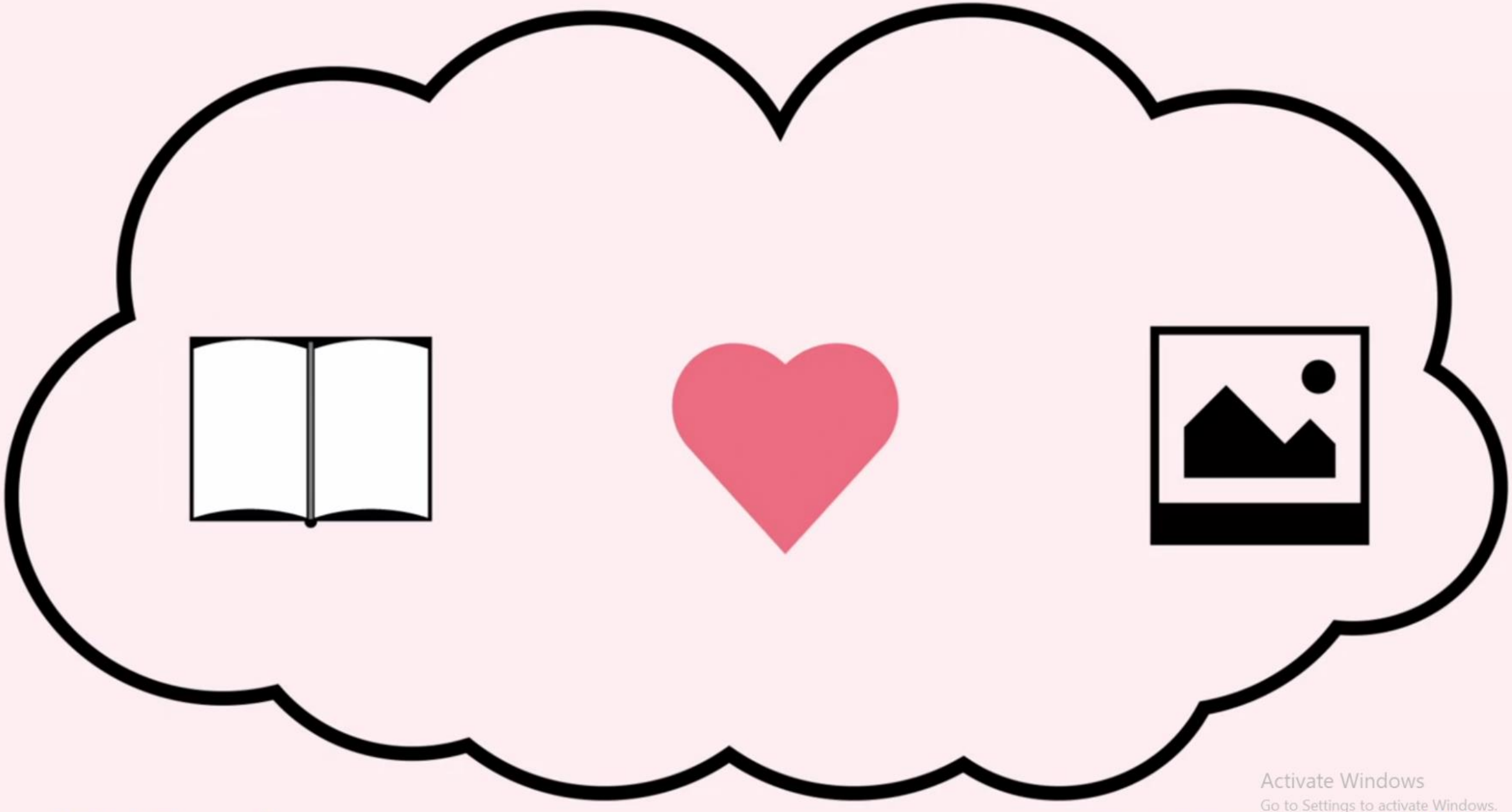

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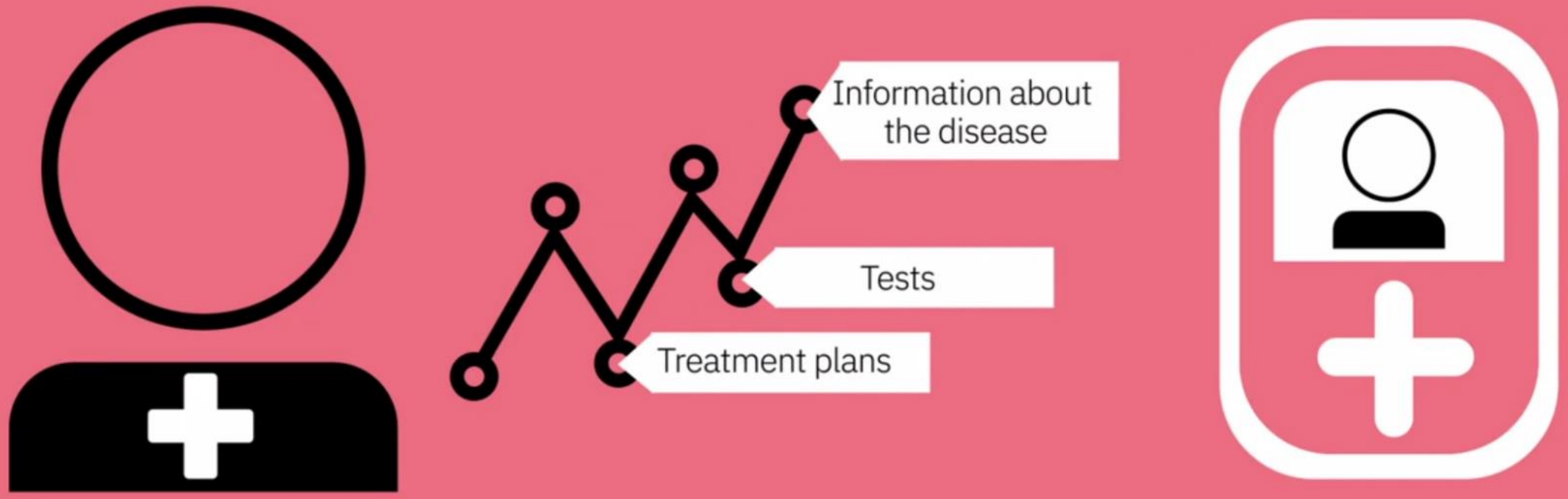

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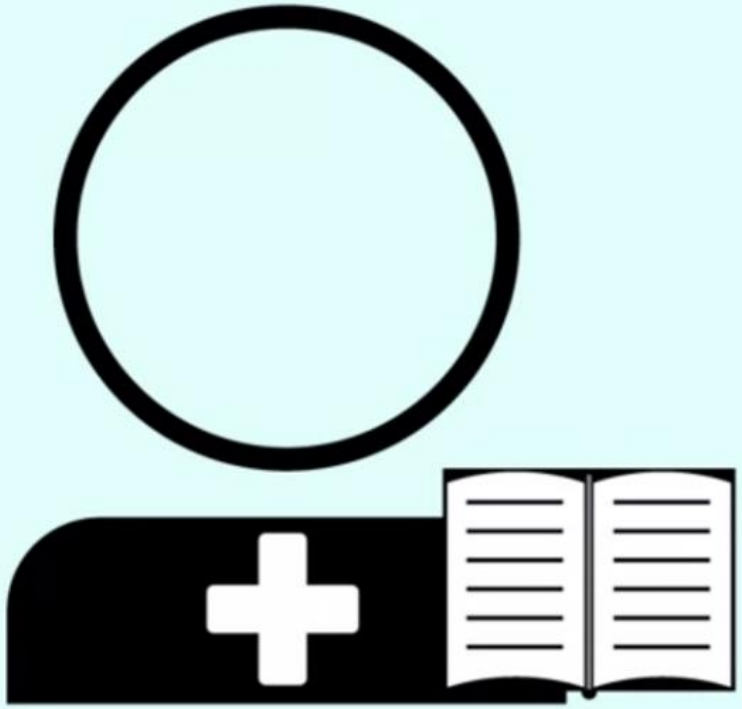

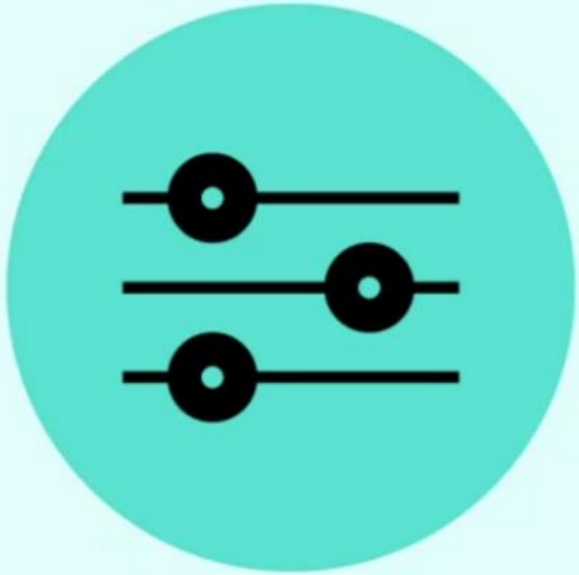

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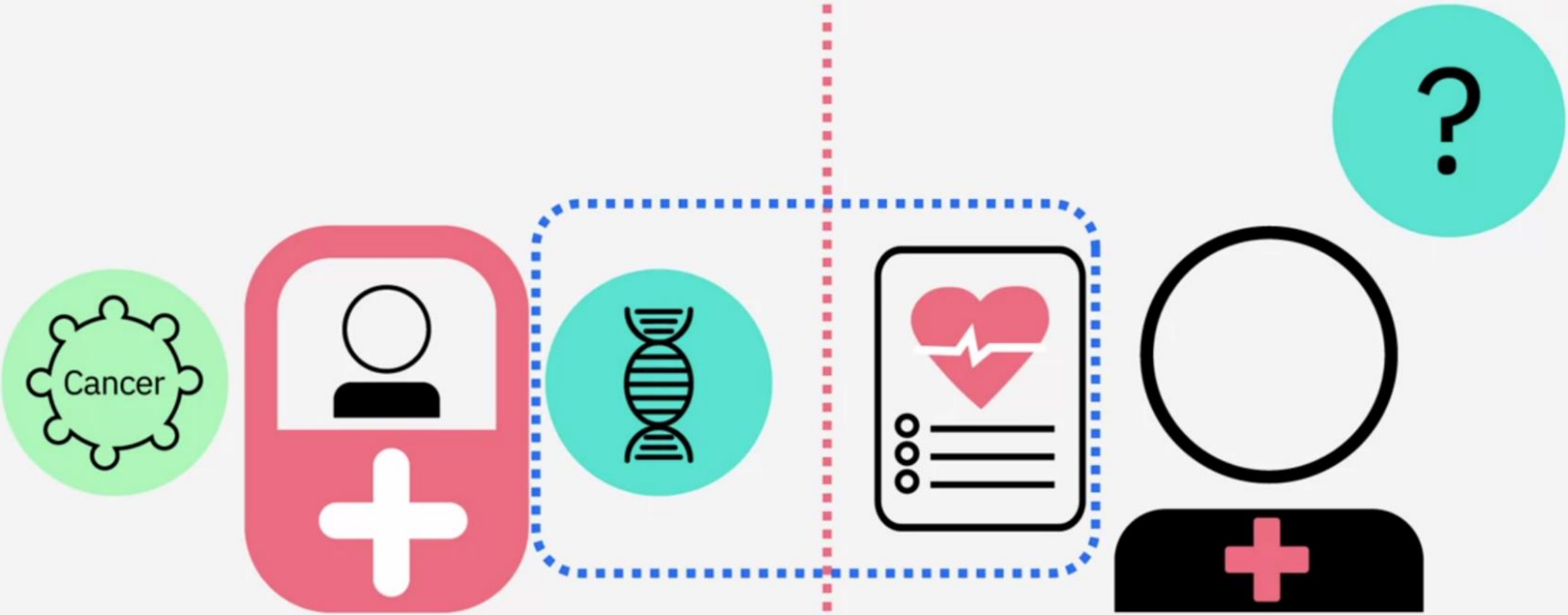

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Data Mining

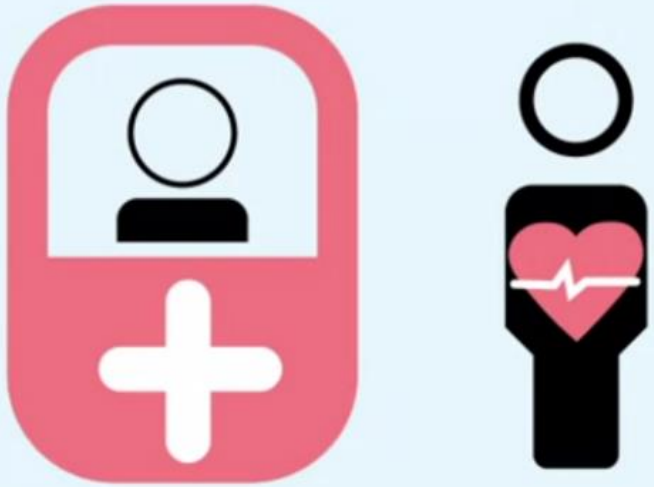
NorthShore University HealthSystem

Chicago

Electronic

Medical

Records



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Data Mining

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Disaster

Preparedness

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- Earthquakes
- Hurricanes
- Tornados
- Floods
- Volcanic eruptions

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Recommendation Engine

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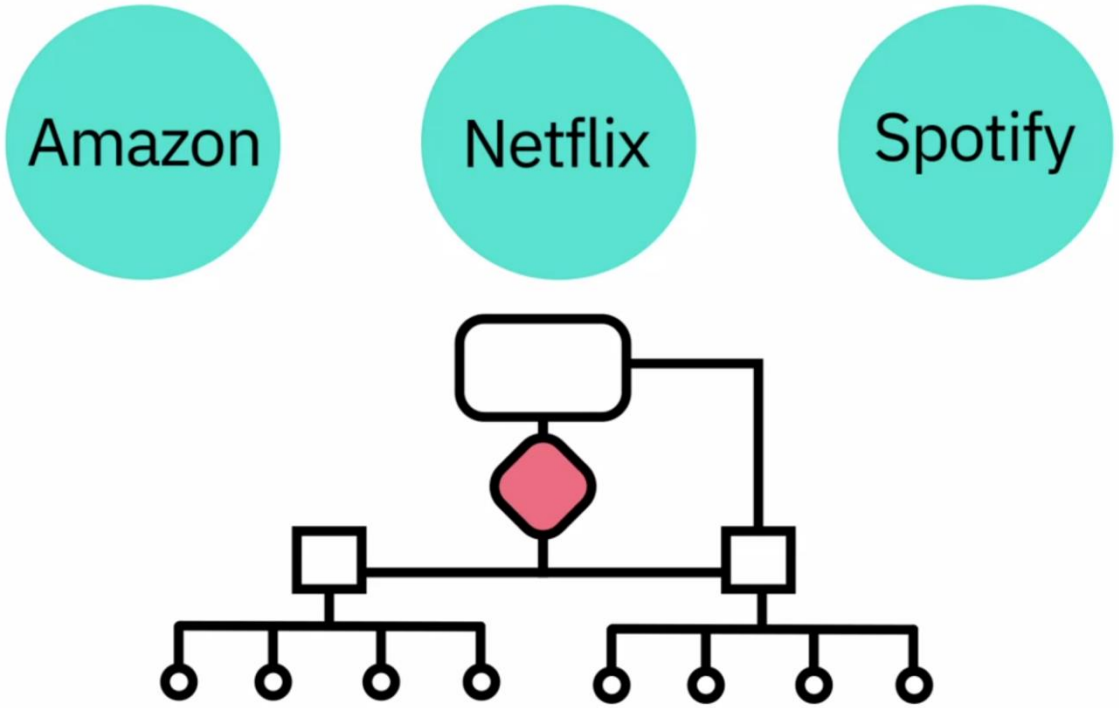

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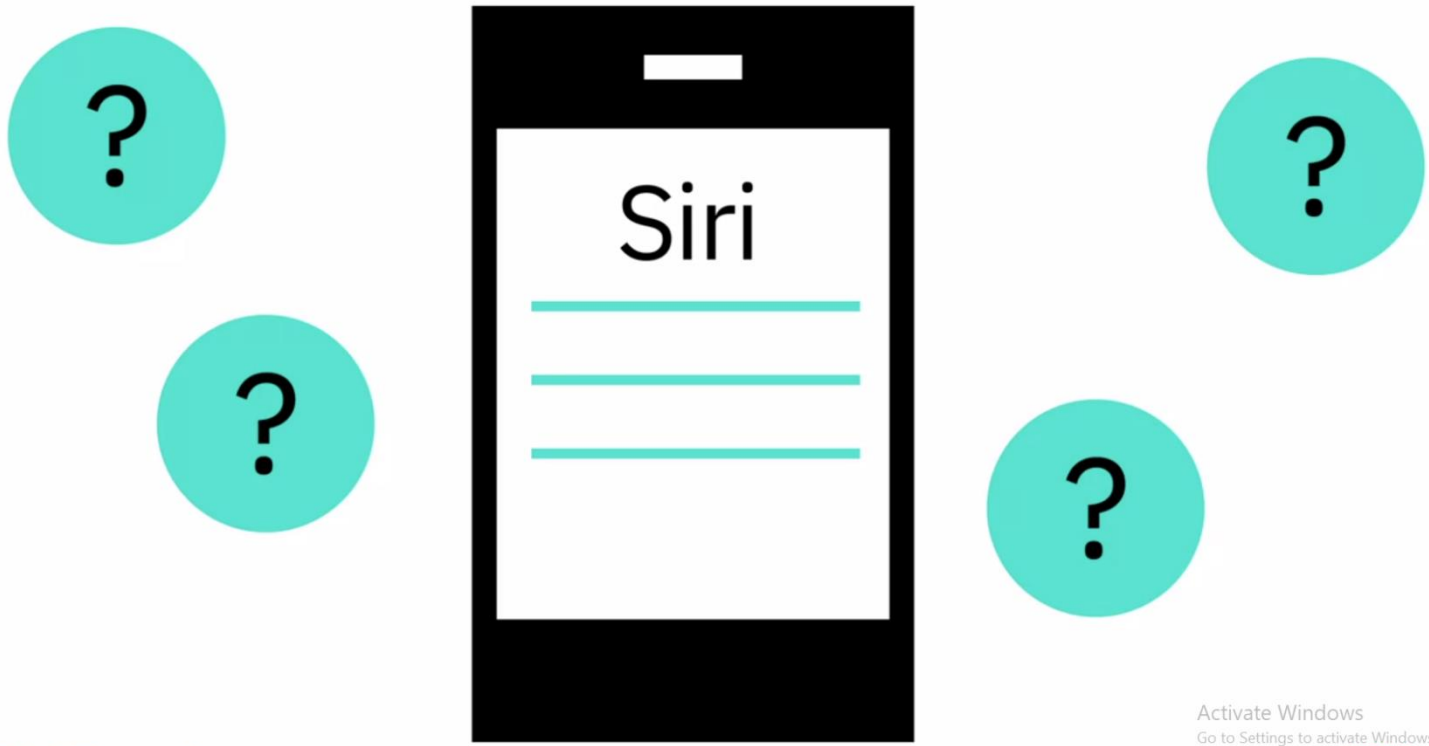

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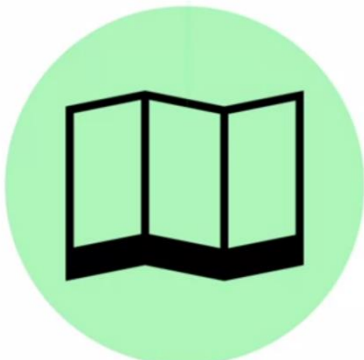
Google



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Business Impact

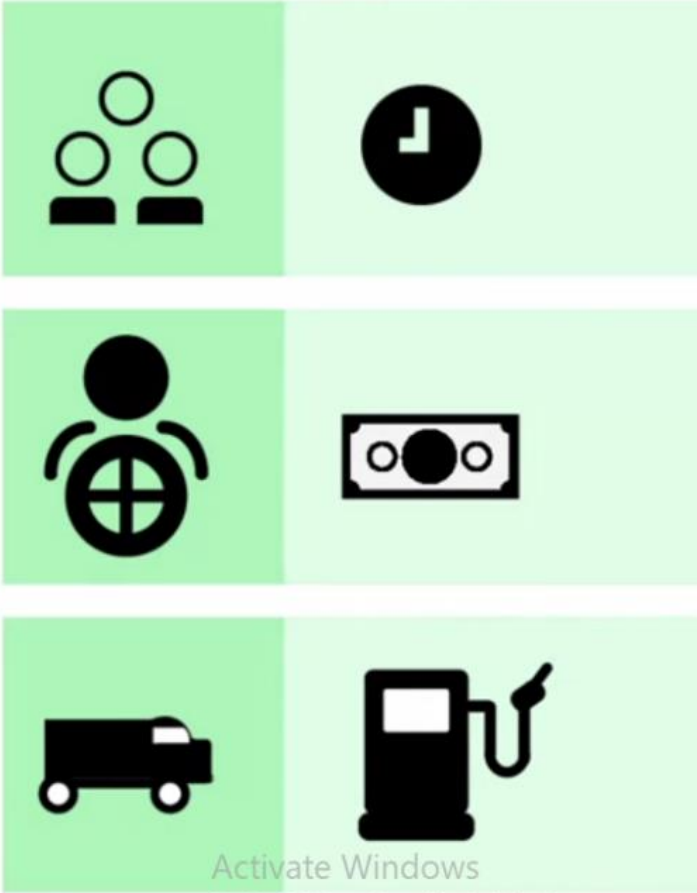
UPS

2013

Route

Guidance

System



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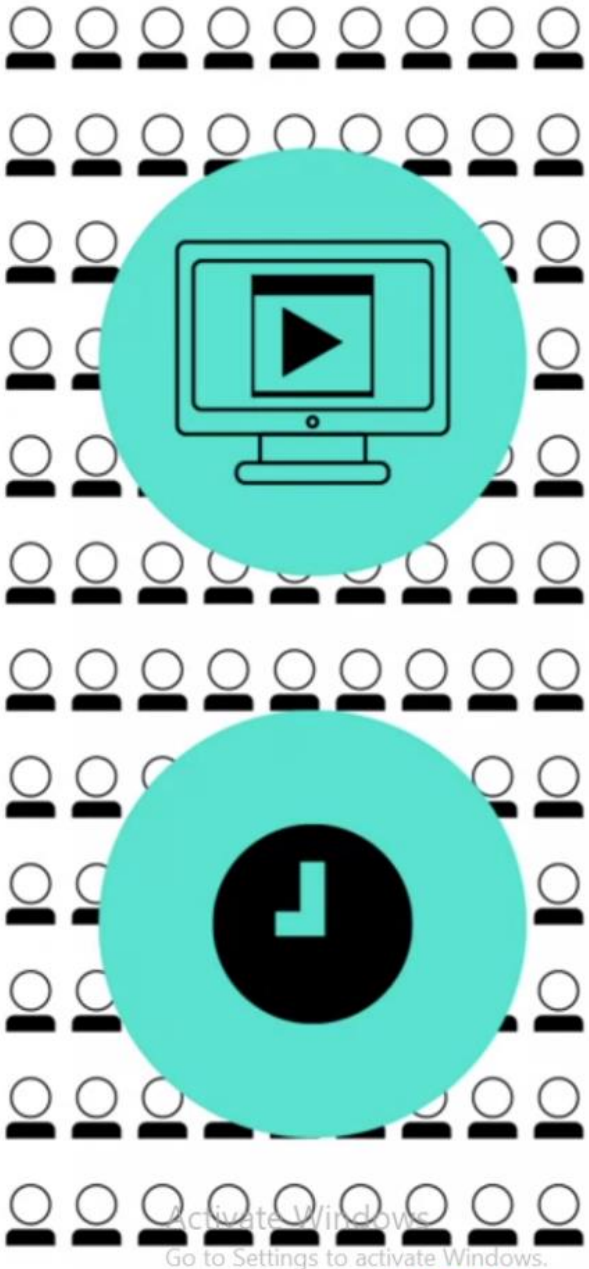
Netflix



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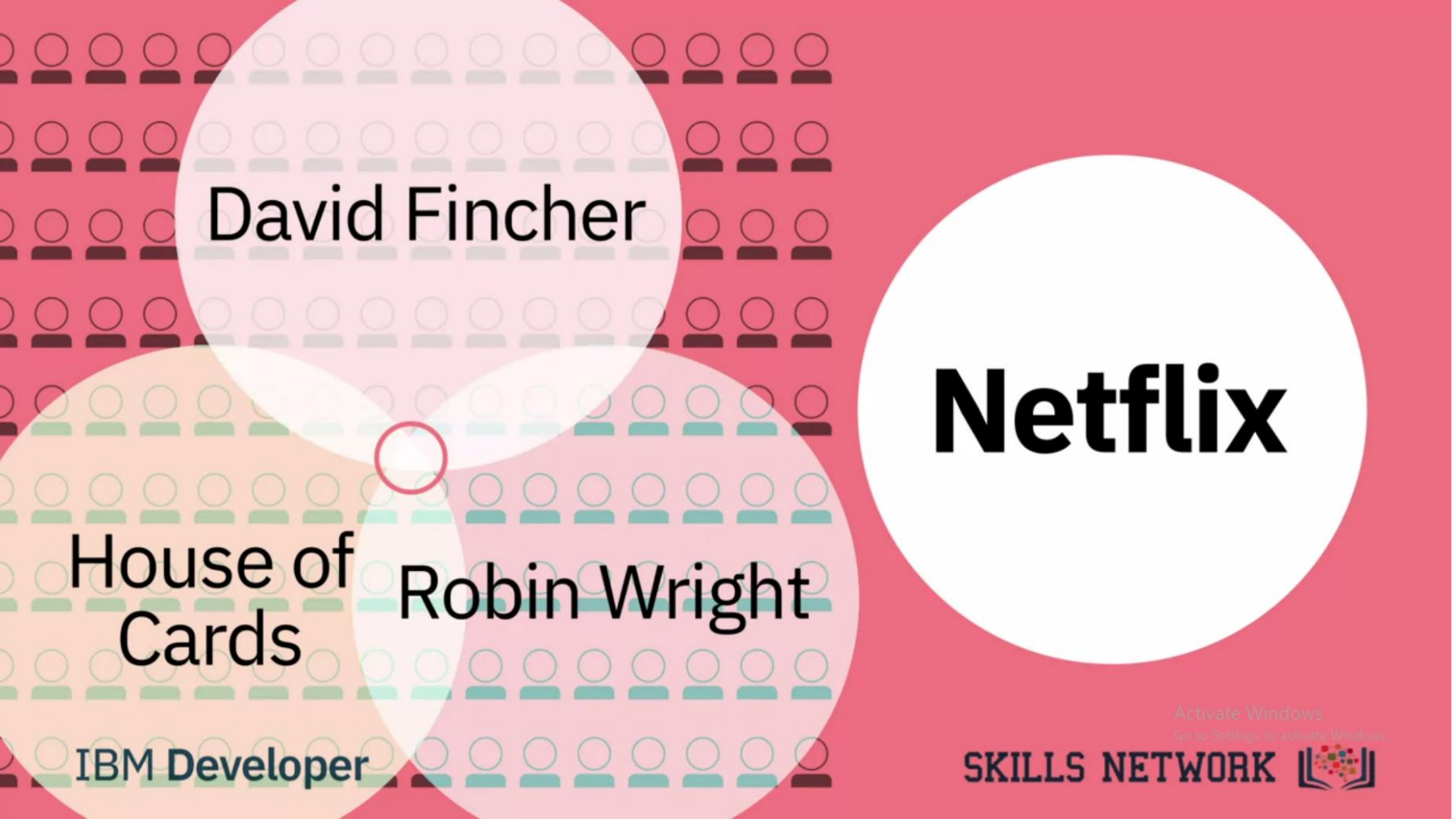
David Fincher
Netflix
House of Cards
Robin Wright
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