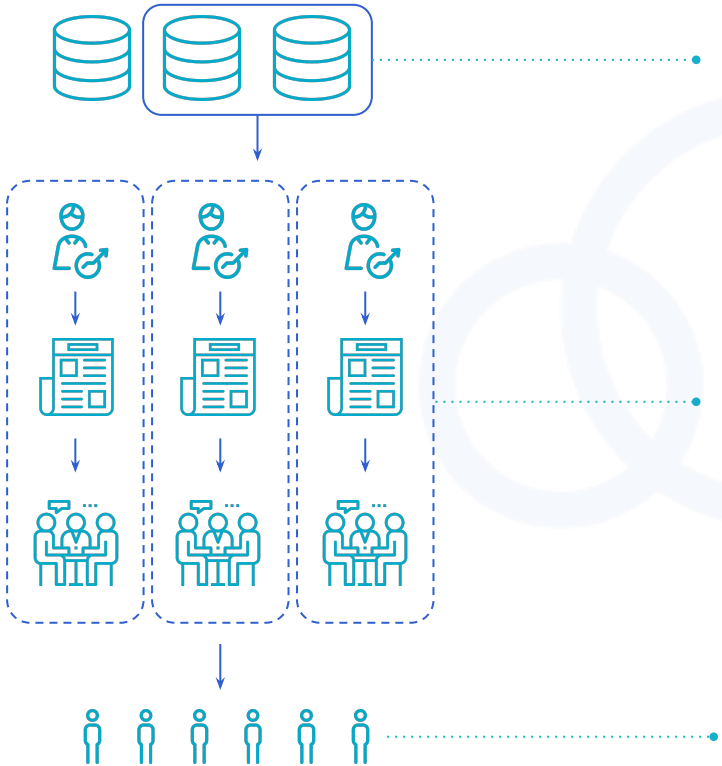
Datanest

Data Science In Practice

This is summary of Datanest Analytics Catalog

for better explanation or more complete catalog, you can contact us at hello@datanest.io

Current state of data



On a daily basis, companies are collecting massive amounts of data. These data are mostly being **kept in Silos** based on the technology being used.

Most of this data is **underutilized** and only being stored for monitoring.

Reactive action instead of proactive.

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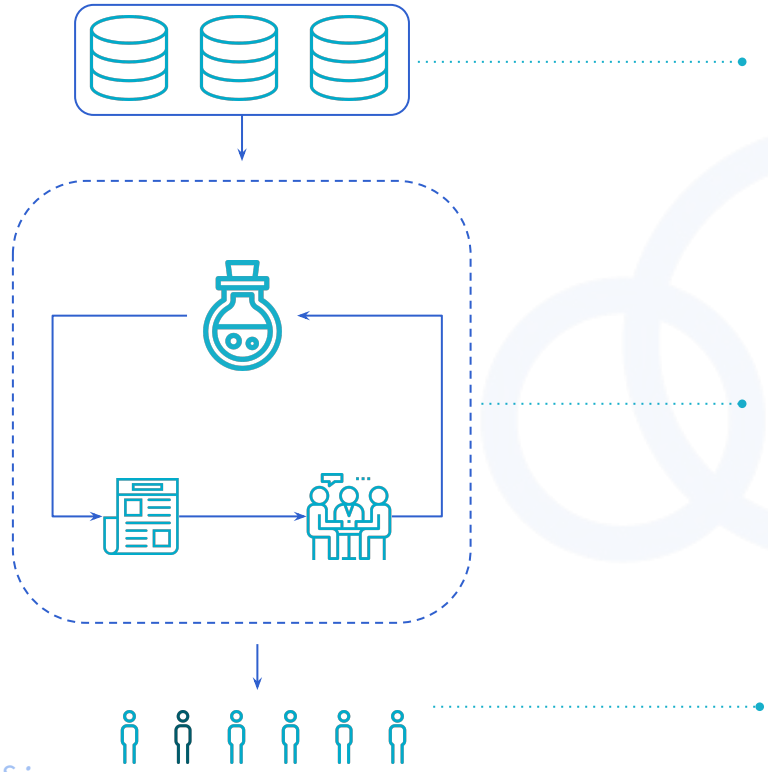
Solution ?

How to leverage it?



Bridging Data silos

To compare and query all your data sources

Solving business cases

Using the power of AI & Machine Learning

Providing with actionable insights

To increase performance & profitability

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Datanest Solutions

Data Exploration

"Descriptive & Discovery"

To validate a business needs based on historical data.

DS as a Service

"All Included"

Model creation, infrastructure & maintenance

ML Products

"Pay as you go"

Finance: Truescore
Retail & Logistic: Order recommendation, dynamic pricing, inventory prediction

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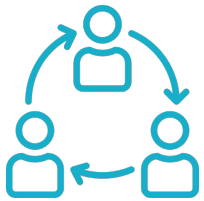
Introducing Datanest

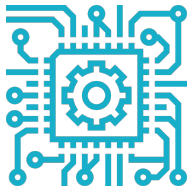
Data Science team



+ Data Scientist
+ Data Engineer
+ System Architect

\+

Infrastructure



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Data-Science as a Service

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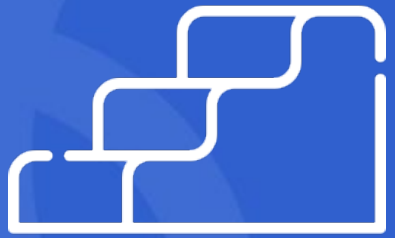
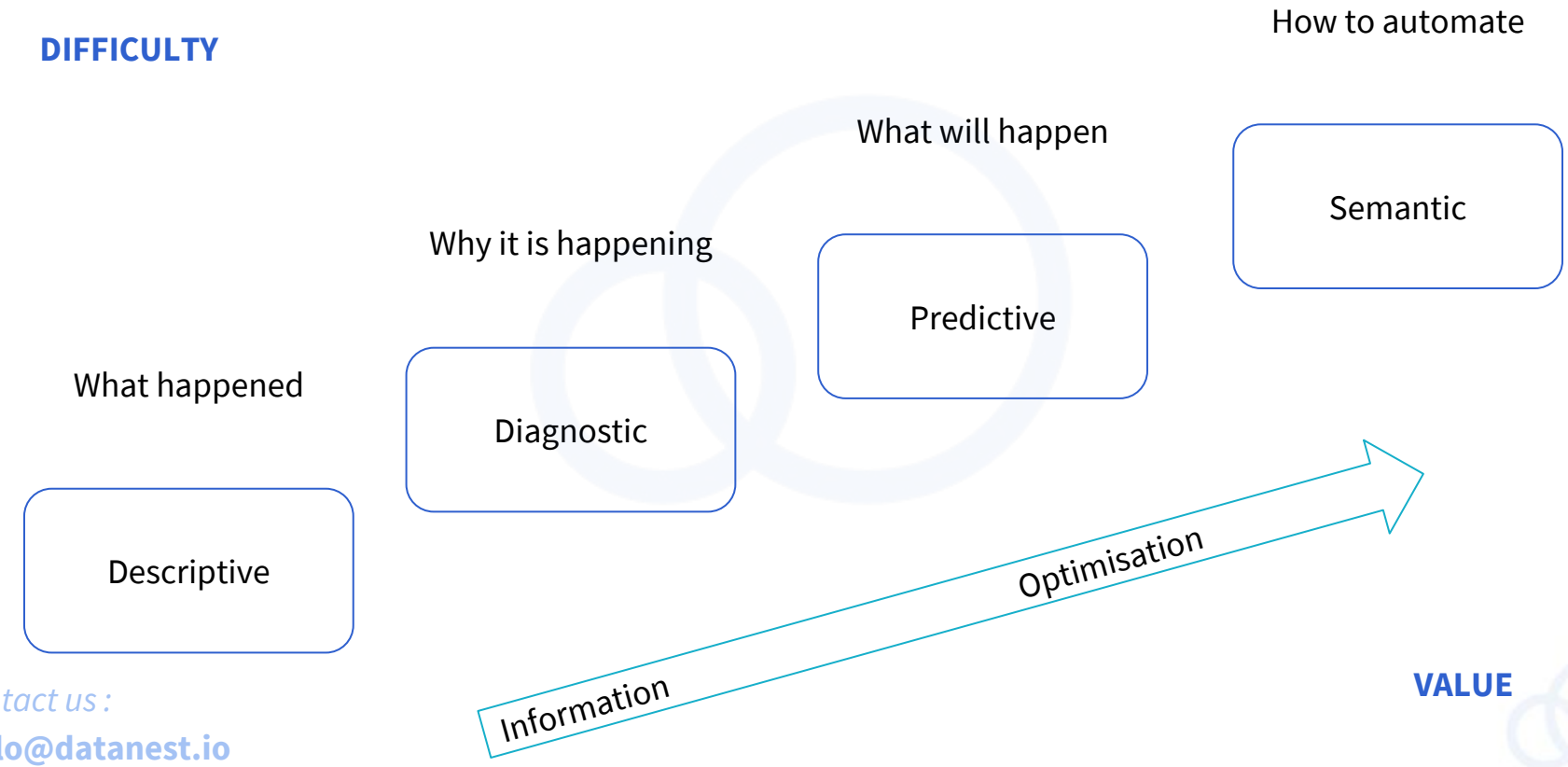
Steps on Data Science?



Datanest Data Science Stage



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Level 1

Descriptive EDA

Describe relation

Describe composition

Compare

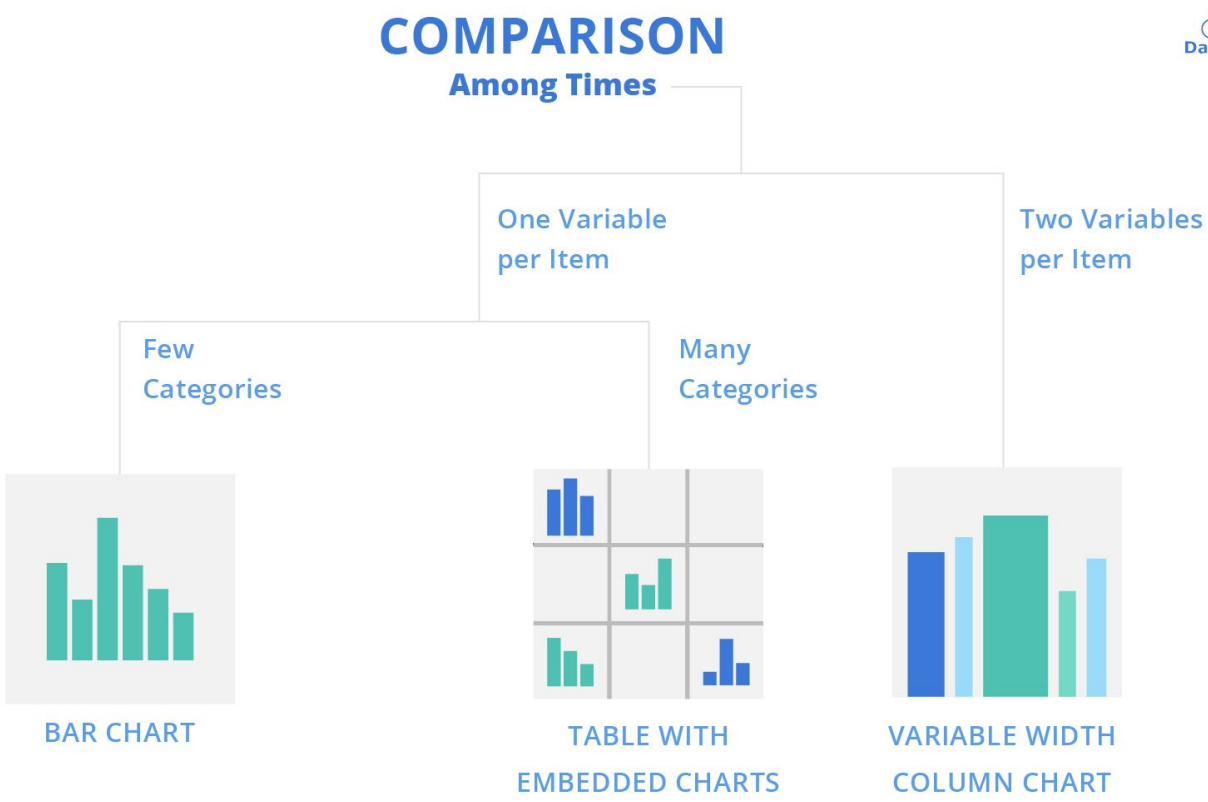
Describe distribution

Comparison

Composition

Distribution

Relationship



COMPARISON

Over Time

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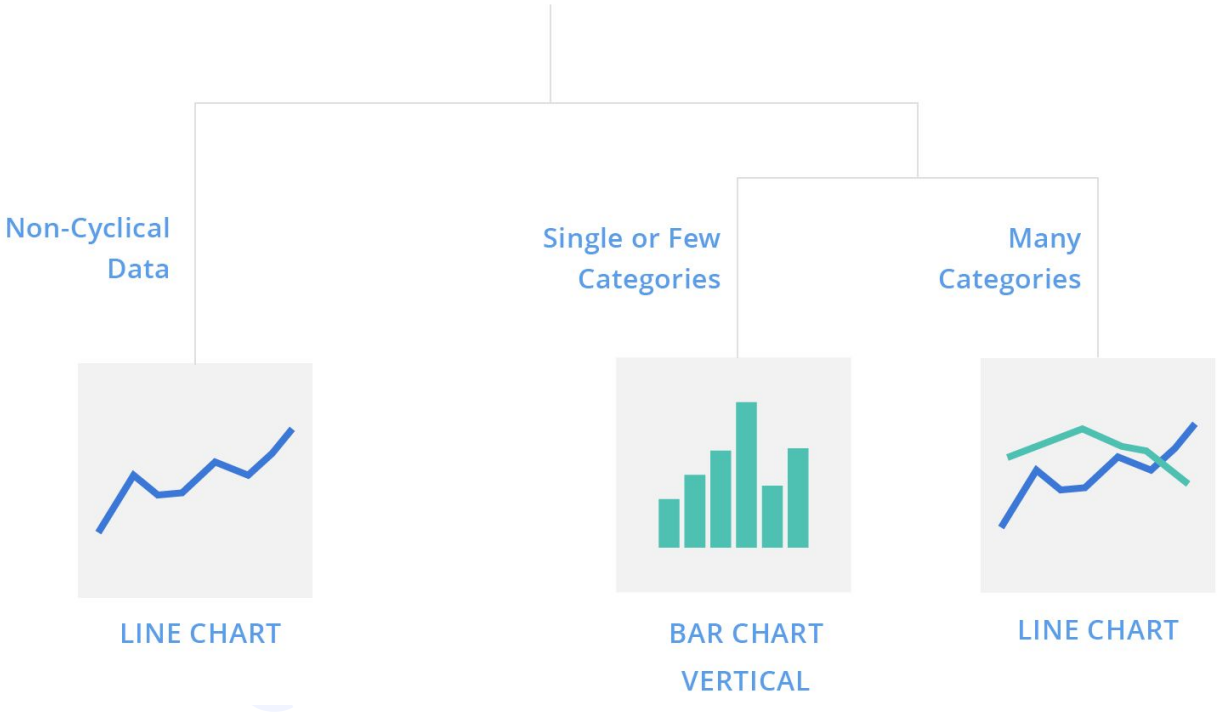

COMPOSITION

Static

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Simple Share of Total

PIE CHART

Accumulation or Substraction to Total

WATERFALL CHART

Components of Components

STACKED 100% BAR CHART WITH SUBCOMPONENTS

Accumulation to total and absolute difference matters

TREE MAP

Comparison
Composition
Distribution
Relationship

COMPOSITION

Changing Over Time

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Few Periods

Only Relative Differences Matter

STACKED 100% BAR CHART

Only Relative Absolute Differences Matter

STACKED BAR CHART

Many Periods

Only Relative Differences Matter

STACKED AREA 100% CHART

Only Relative Absolute Differences Matter

STACKED AREA CHART

Comparison
Composition
Distribution
Relationship

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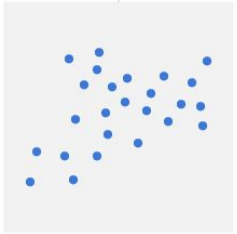
DISTRIBUTION

Single Variable

Two Variables

Few Data Points

Many Data Points



SCATTER PLOT

BAR HISTOGRAM

LINE HISTOGRAM

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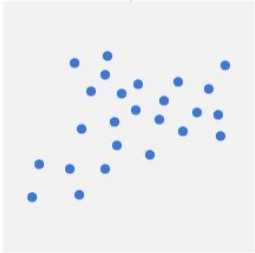
RELATIONSHIP

Two Variables



SCATTER PLOT

Three or More Variables

SCATTER PLOT WITH BUBBLE SAVE

Level 2

Discovery

Why Customers Leave Us ?

Why Our Strategy Doesn’t Work ?

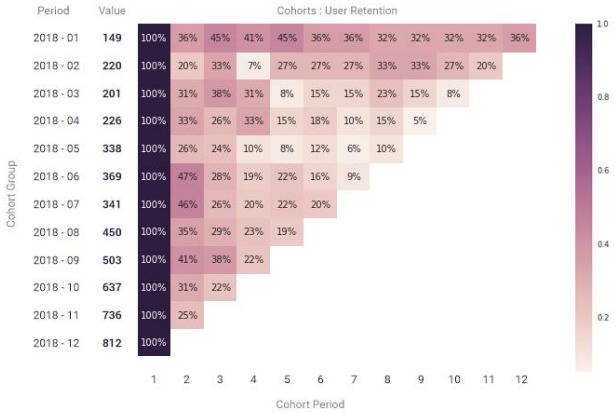
Why Our Profit Decrease ?

How to reduce my churn rate?

“Why Customers Leave Us ?”

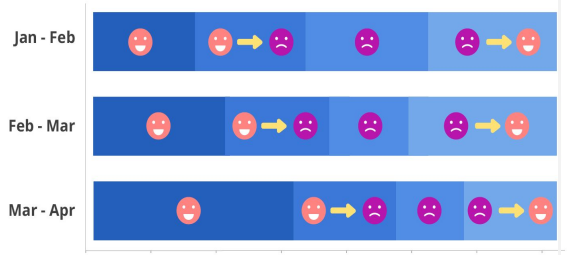
1

We accidentally change the



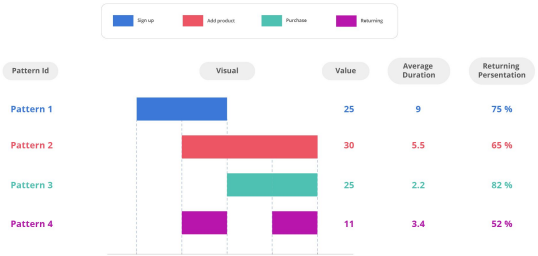
2

Satisfaction level is changing



3

Some customer pattern not come back



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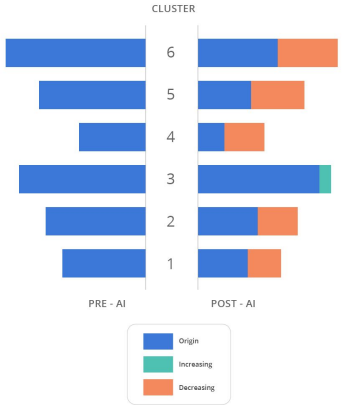
This is just sample, currently we have 9 hypothesis for “Why Customer Leave us?”

How to optimize my strategy ?

“Why Our Strategy Doesn’t Work ?”

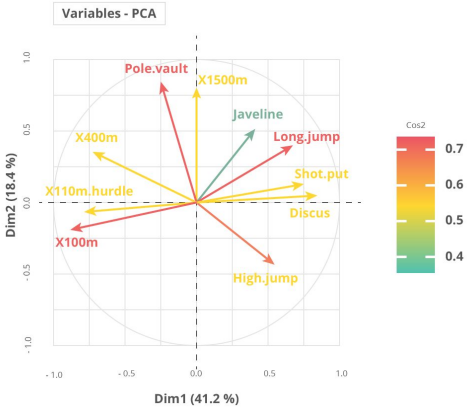
1

Using one-size fits all



2

Non efficient measurement



3

Some drop off to

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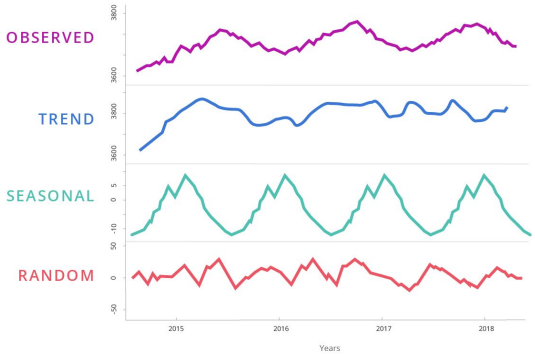
This is just sample, currently we have 7 hypothesis for “Why Our Strategy Doesn’t Work?”

How to optimize my profit ?

“Why Our Profit Decrease ?”

1

Command Trends

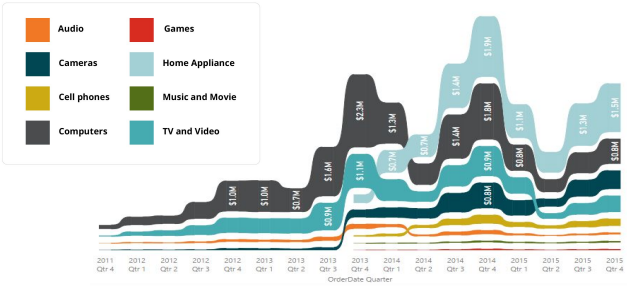


2

Move to less profitable item

3

We can’t catch customer movement



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This is just sample, currently we have 9 hypothesis for “Why Our Profit Decrease

Level 3

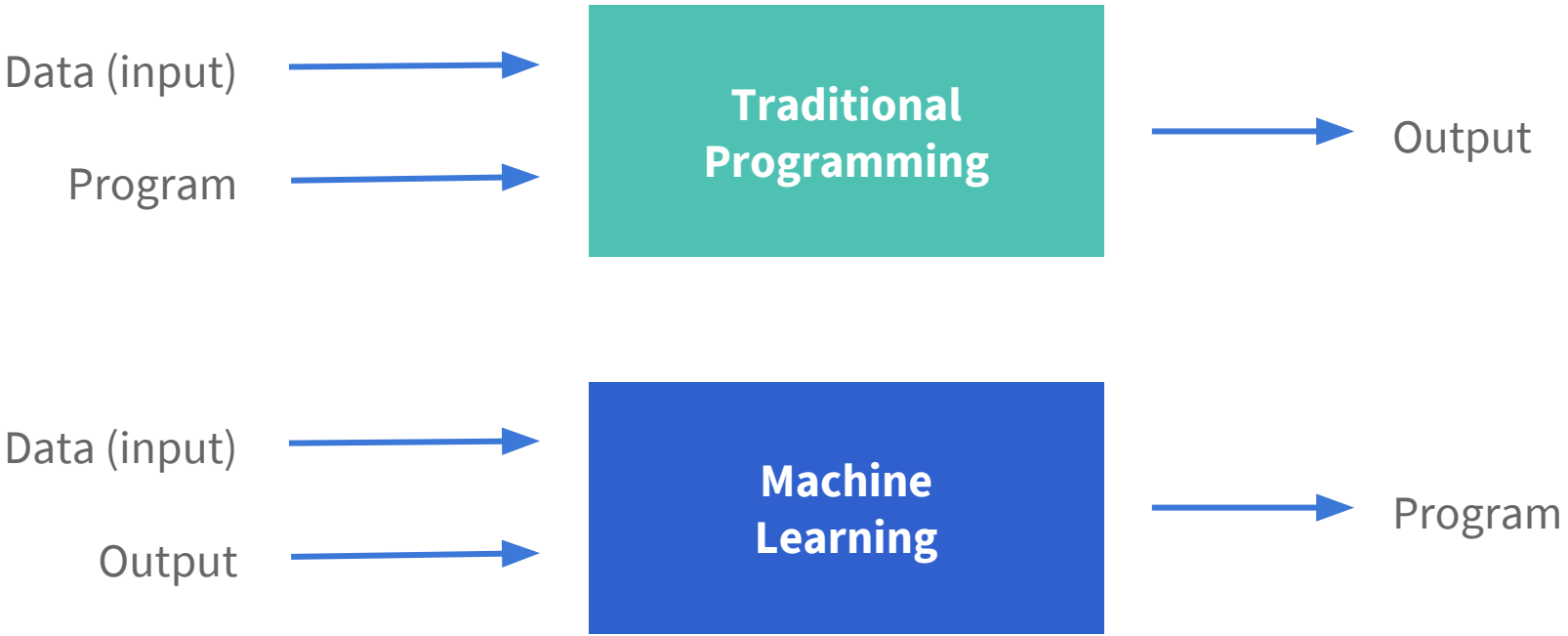
Predictive Machine Learning

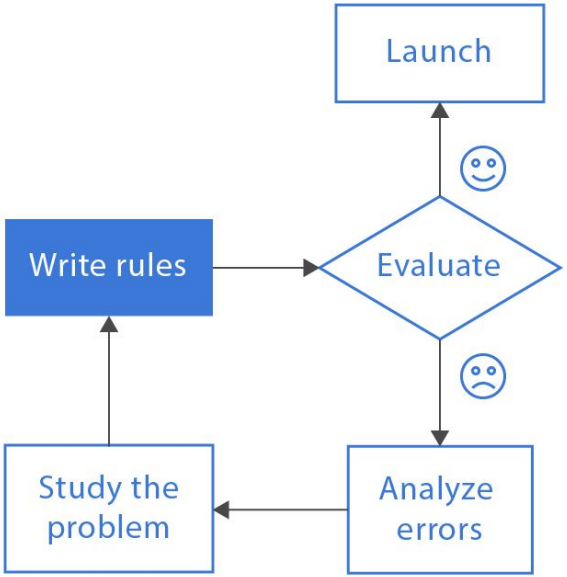
What is ML ?

Supervised

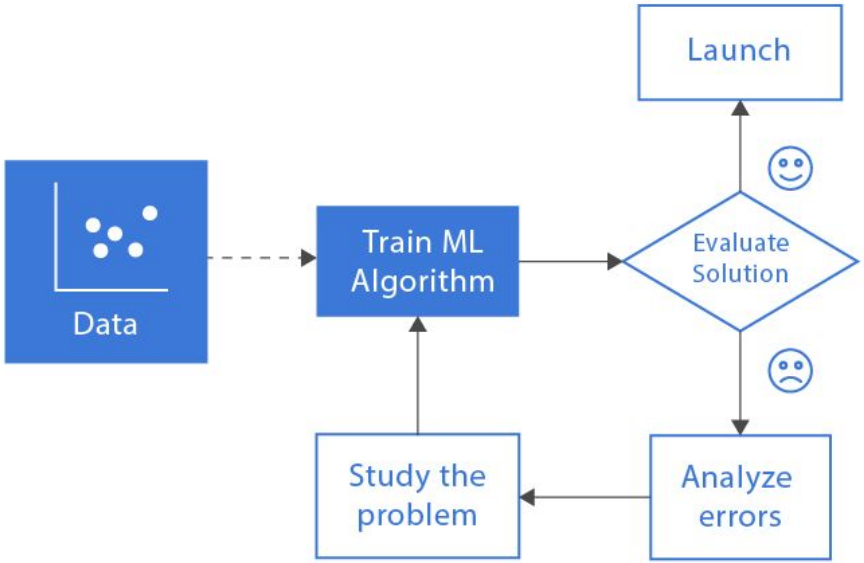
Unsupervised

Other Learning Types


Data (input)
Program
Traditional Programming
Output
Data (input)
Output
Machine Learning
Program

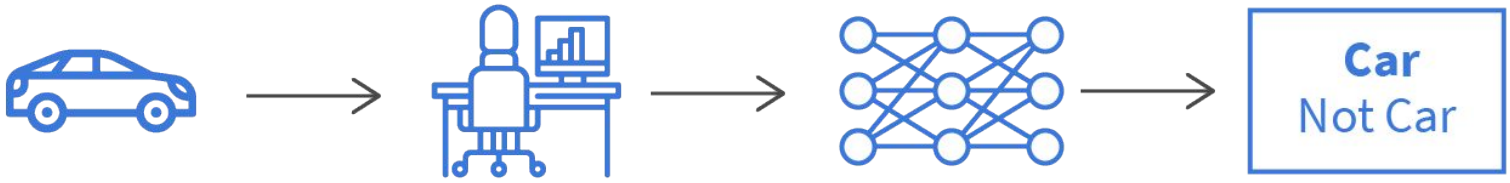


Traditional Programming

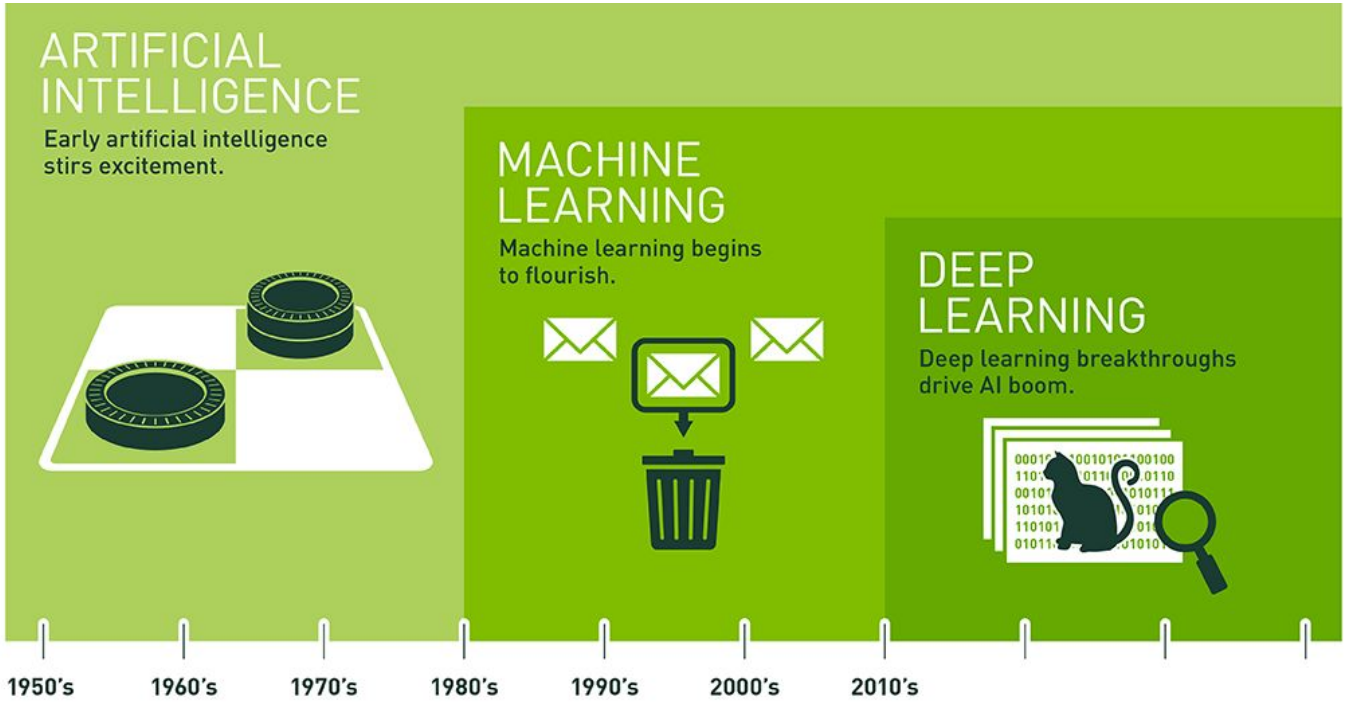


Machine Learning

Machine Learning

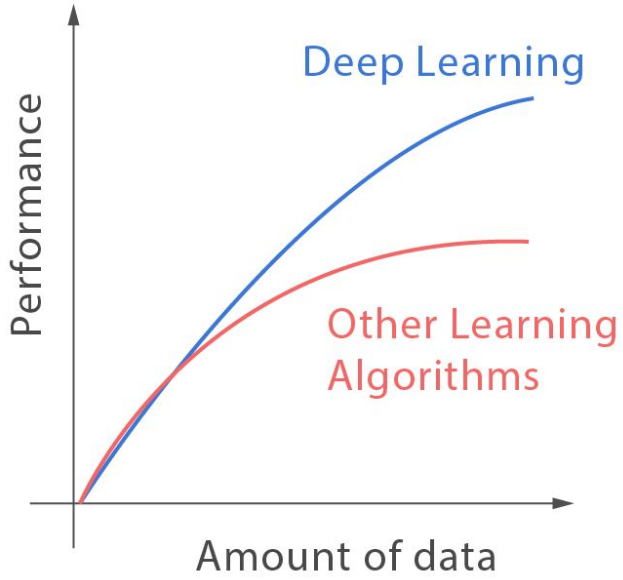


Deep Learning



Since an early flush of optimism in the 1950s, smaller subsets of artificial intelligence – first machine learning, then deep learning, a subset of machine learning – have created ever larger disruptions.

Why deep learning ?



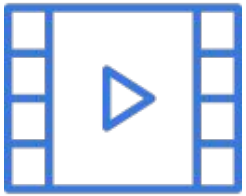
How do data science techniques scale with amount of data ?

Big Data ?

Excel file

PDF file

Sound



Video

Images

Other type of dataset you can ask on ***hello@datanest.io***

How to Formulate Problem?

Supervised Learning

What?	**Classification**
When?	**Survival**
How Much?	**Regression**
How much at certain time ?	**Time series**
How much at certain time and place ?	**Panel**

*For get industry tailored example you can contact us in **hello@datanest.io***

Supervised Learning

Where?	**Geospatial**
Where at certain time?	**Geospatial Time Series**
How Much?	**Longitudinal**
Multiple what ?	**Sequential**
Why?	**Network (Cause n Effect)**

*For get industry tailored example you can contact us in **hello@datanest.io***

Unsupervised Learning

Clustering

Anomaly Detection

Association Rule,
labelling each other

Decomposition

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Other Learning Types

Metric Learning

Learning to Rank

Learning to Recommend

Semi-Supervised Learning

Self-Supervised Learning

Reinforcement Learning: Q-Learning

Reinforcement Learning: Multi-Armed Bandit

For get industry tailored example you can contact us in ***hello@datanest.io***

How to make machine learning plan come to reality?

Answering Key Question

1. Problem Statement ?
2. Action ?
3. Specification ?
4. How to communicate to executor?
5. Variable and Label?
6. Success Criteria?
7. Threshold?

Contact us at

hello@datanest.io