



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

THƯ NGỎ

Trang điện tử Hướng nghiệp 4.0 (huongnghiep40.vn) ra đời với mục đích góp phần vào công cuộc định hướng nghề nghiệp cho các bạn học sinh THPT và sinh viên Việt Nam, trong bối cảnh cuộc Cách mạng công nghiệp 4.0 đã và đang bùng nổ mạnh mẽ hơn bao giờ hết. Bằng việc cung cấp những thông tin đa chiều, thiết thực và bổ ích về các ngành nghề có sức nóng và tiềm năng phát triển bền vững trong tương lai dài hạn thông qua các tin tức tổng hợp cùng những góc nhìn sâu rộng của các chuyên gia uy tín ở nhiều lĩnh vực như hướng nghiệp, khởi nghiệp, giáo dục, công nghệ thông tin, kinh tế, xã hội, tài chính ngân hàng..., trang điện tử huongnghiep40.vn được kỳ vọng sẽ mang đến những kiến thức nền tảng hữu ích về các ngành nghề trong xã hội cũng như thị trường nhân lực Việt Nam và thế giới.

Trang điện tử huongnghiep40.vn cam kết được xây dựng và phát triển với mục đích hoàn toàn phi lợi nhuận. Tất cả các bài viết và ebook được tổng hợp, đăng tải và chia sẻ tại đây đều có thể xem và tải về miễn phí, với mục đích góp thêm những cơ hội làm giàu kiến thức cho tất cả mọi người.

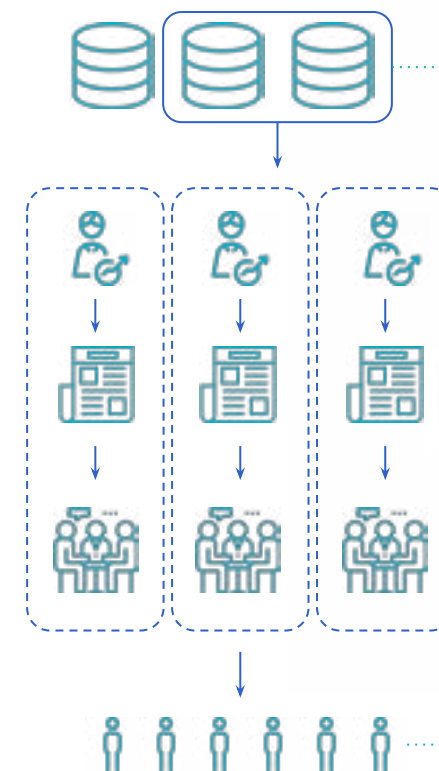
Chúc bạn đọc có được những thông tin bổ ích và định hướng nghề nghiệp đúng đắn cho tương lai.

Trân trọng,

Ban biên tập website huongnghiep40.vn

huongnghiep40.vn

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.

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Reactive action instead of proactive.

Solution ?

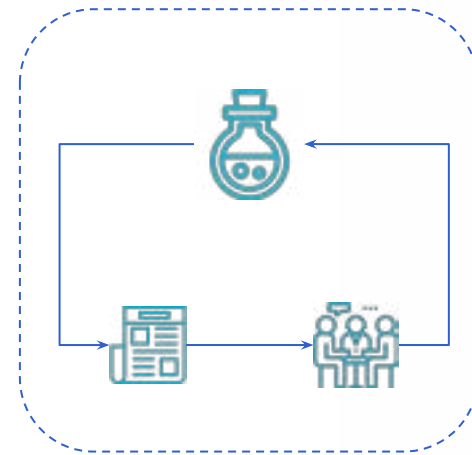


How to leverage it?



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

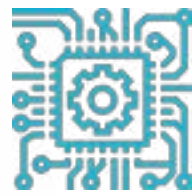
Data Science team



- + Data Scientist
- + Data Engineer
- + System Architect

+

Infrastructure



=

Data-Science as a Service

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Steps on Data Science?



Datanest Data Science Stage

DIFFICULTY

What happened

Descriptive

Why it is happening

Diagnostic

What will happen

Predictive

How to automate

Semantic

Information

Optimisation

VALUE

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Descriptive EDA

Describe relation

Describe composition

Describe distribution

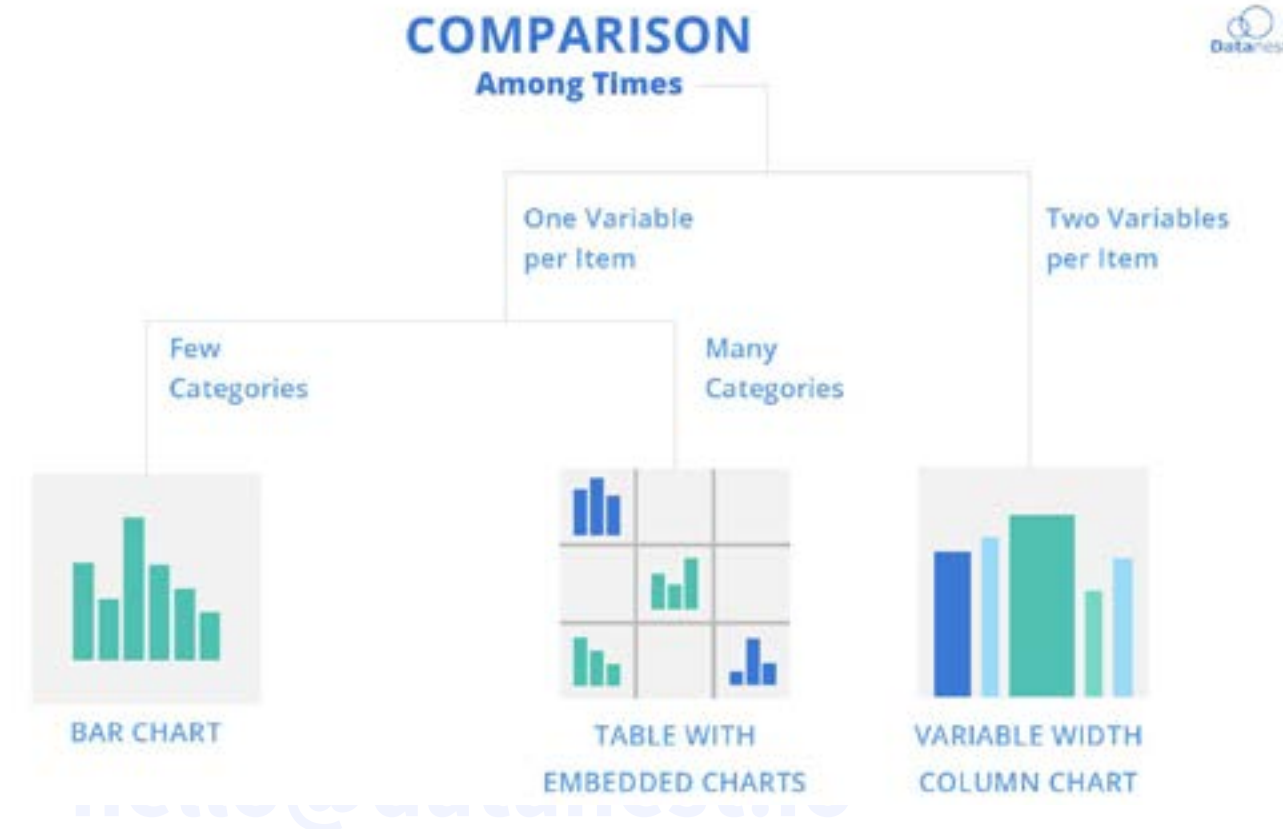
Compare

Comparison

Composition

Distribution

Relationship



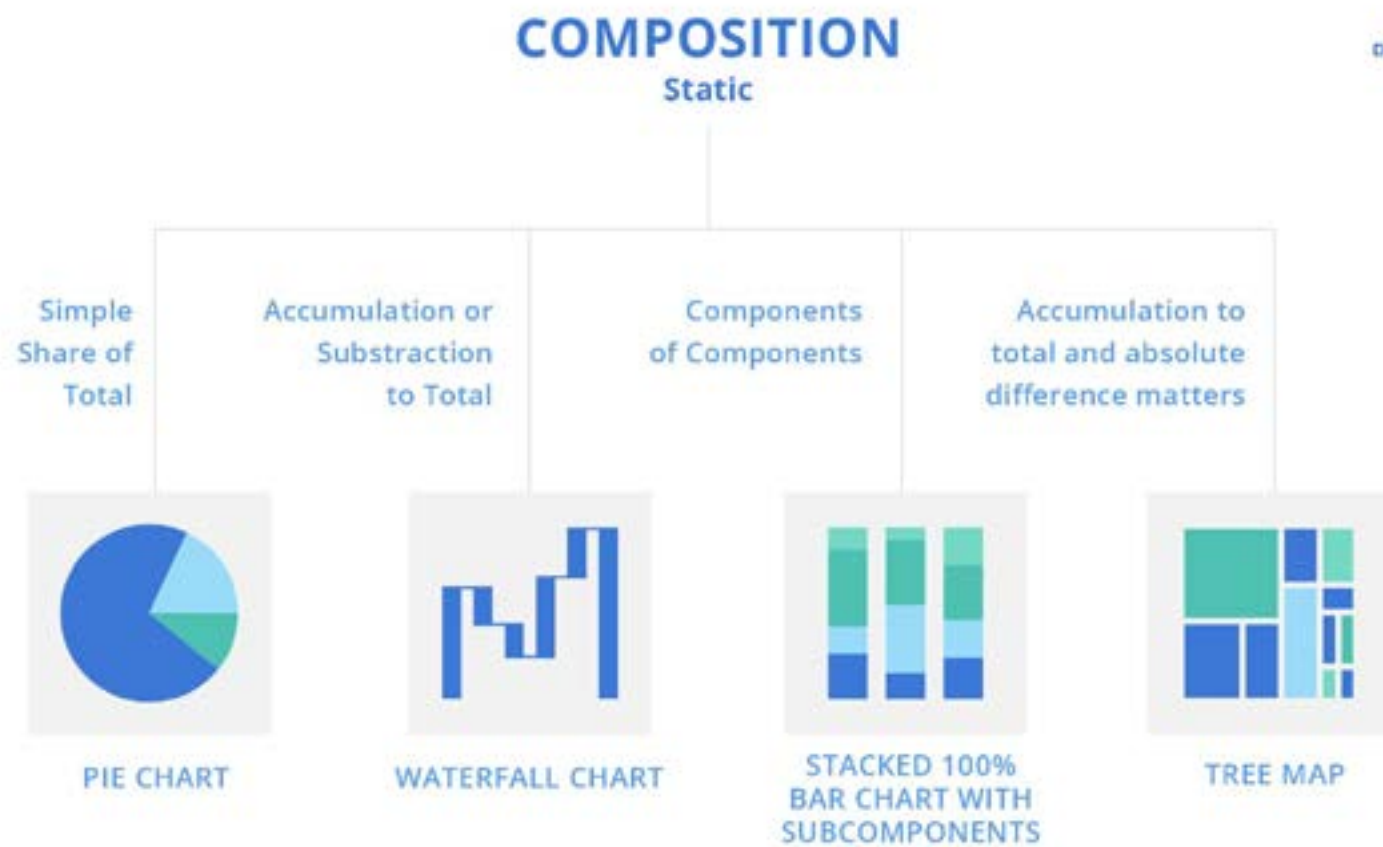
Comparison

Composition
Distribution
Relationship

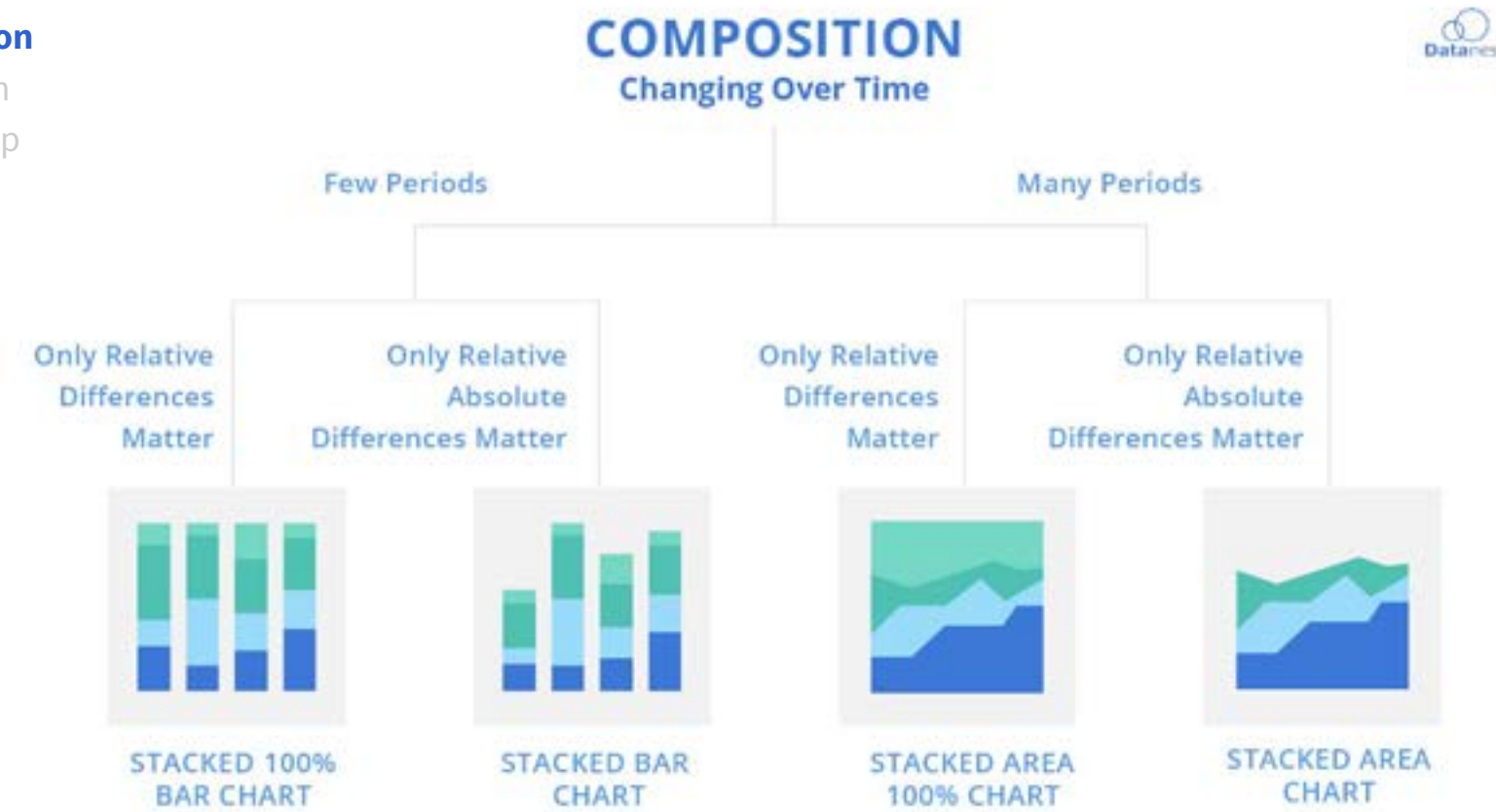


Comparison

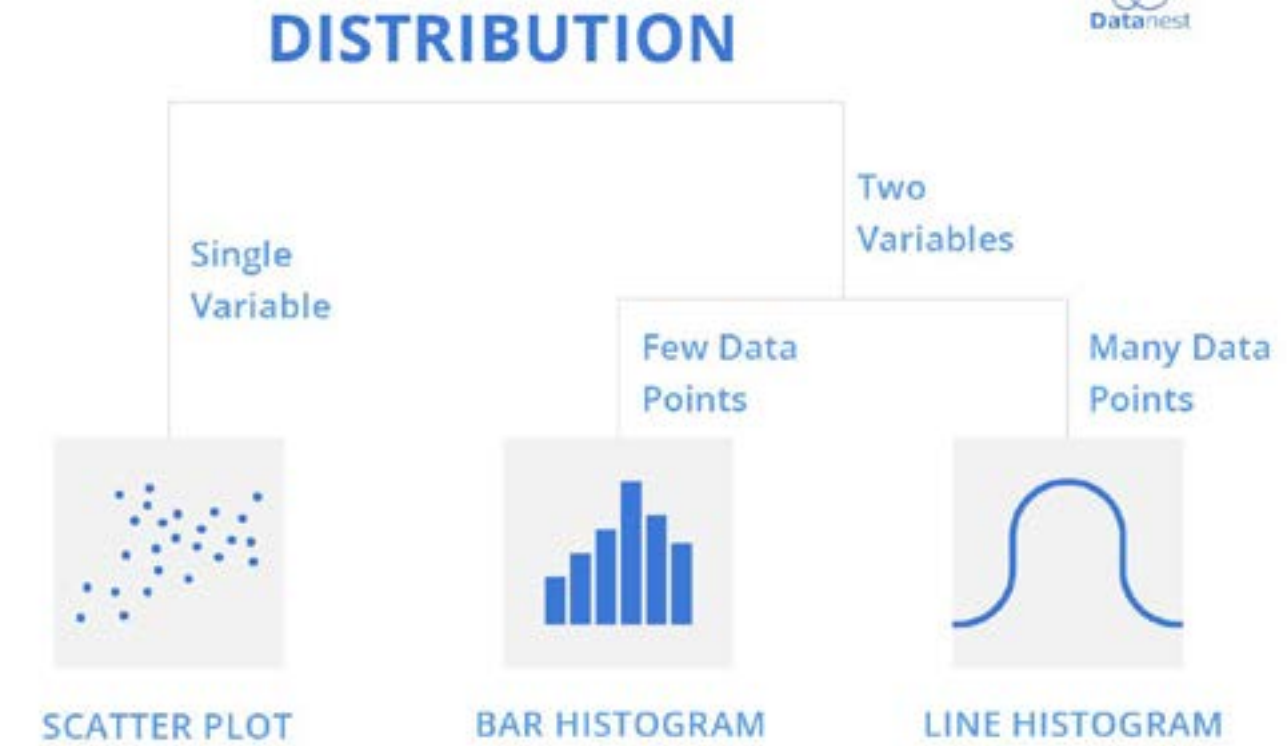
Composition
Distribution
Relationship



Comparison
Composition
Distribution
Relationship



Comparison
Composition
Distribution
Relationship





RELATIONSHIP



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 ?”

How to optimize my strategy ?

“Why Our Strategy Doesn't Work ?”

1

We accidentally change the



2

Satisfaction level is changing



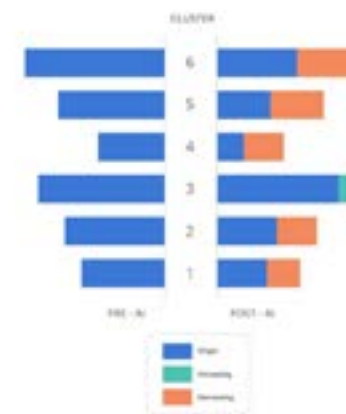
3

Some customer pattern not come back



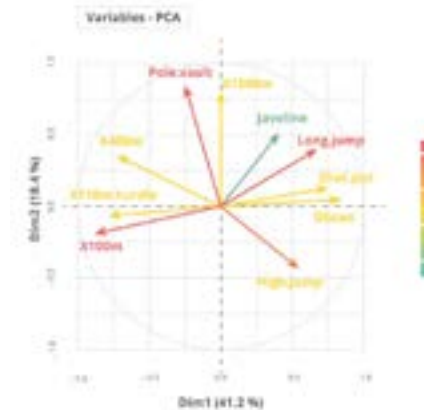
1

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 9 hypothesis for “Why Customer Leave us?”

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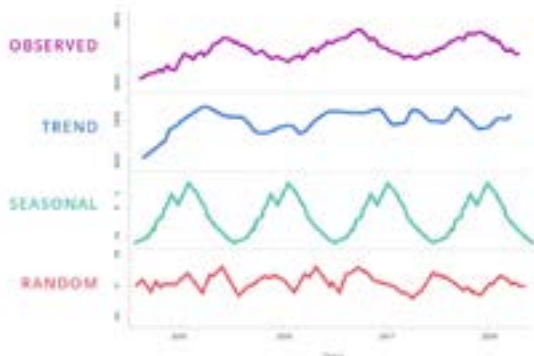
This is just sample, currently we have 7 hypothesis for “Why Our Strategy Doesn't Work?”

How to optimize my profit ?

“Why Our Profit Decrease ?”

1

Command Trends



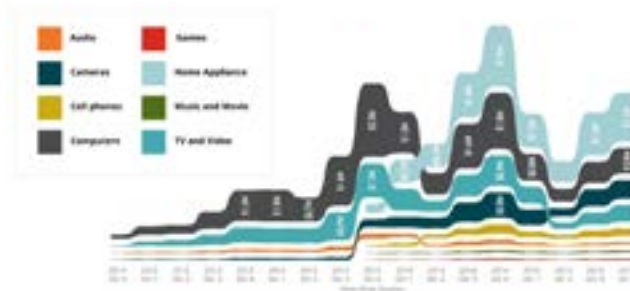
2

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

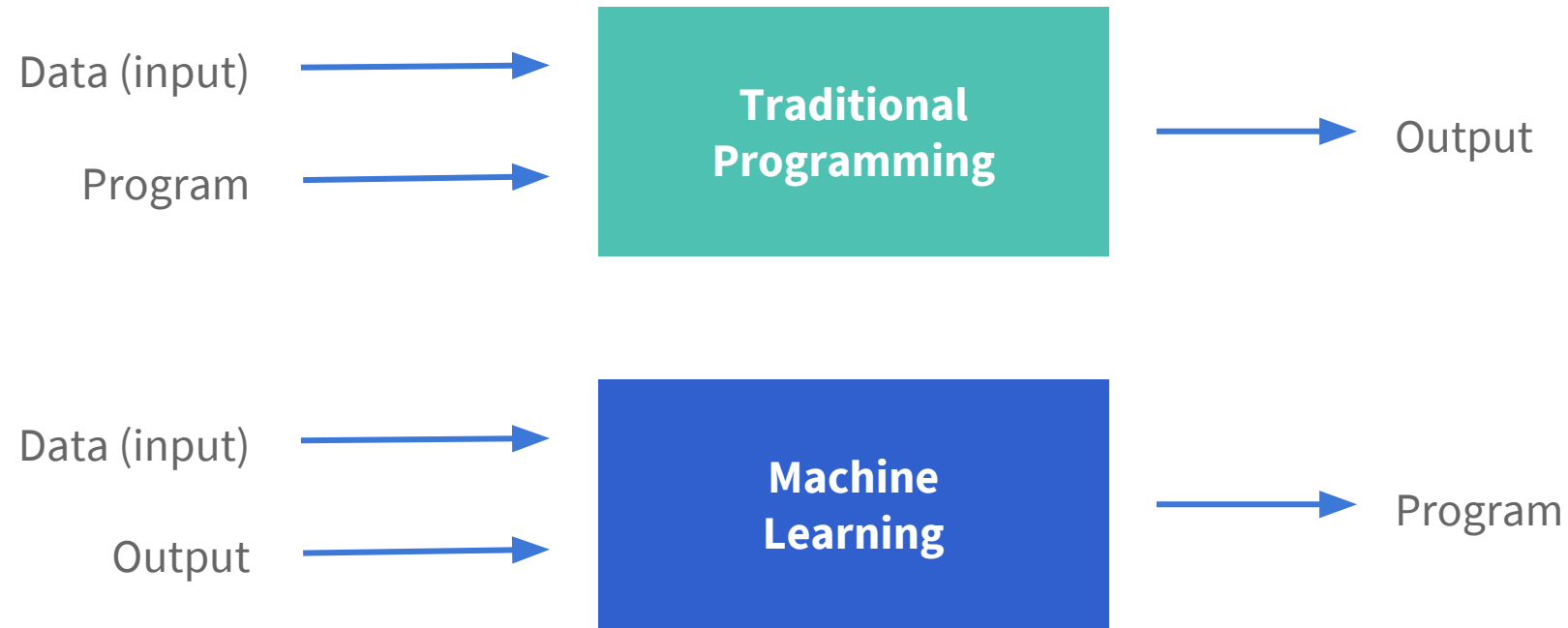
Predictive Machine Learning

Supervised

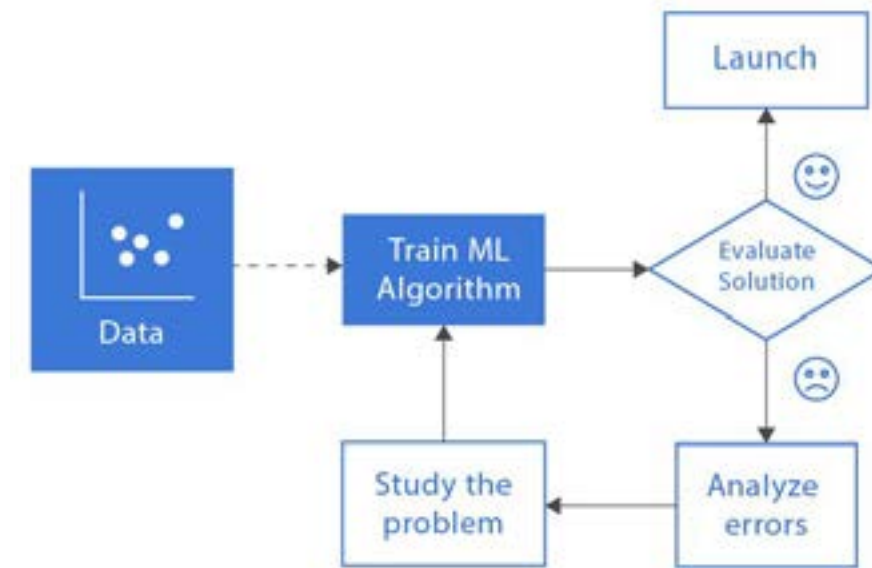
What is ML ?

Other Learning Types

Unsupervised

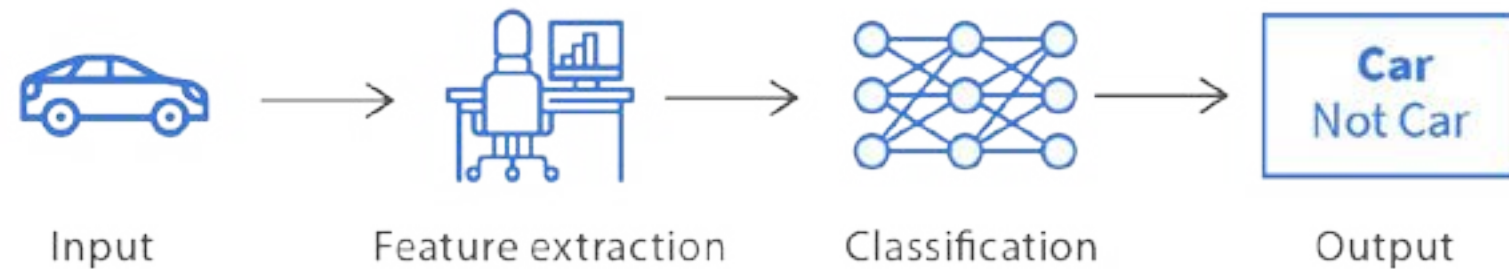


Traditional Programming

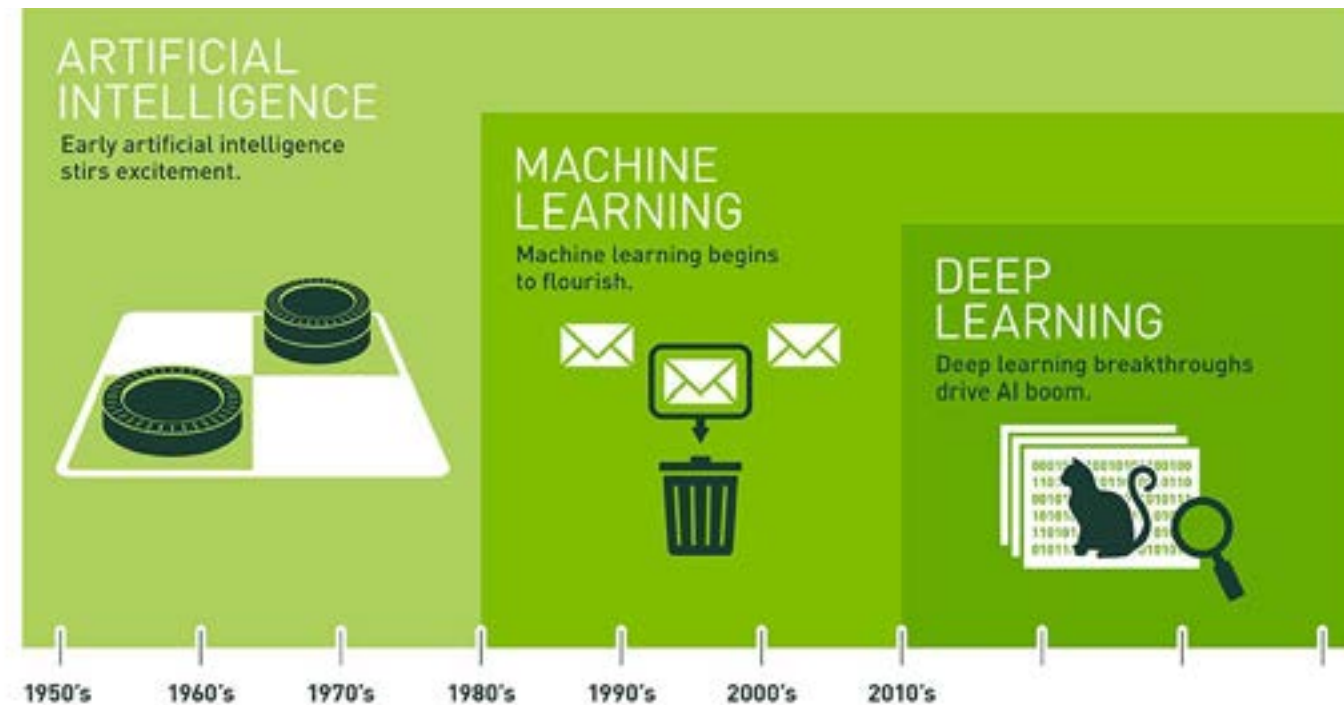


Machine Learning

Machine Learning

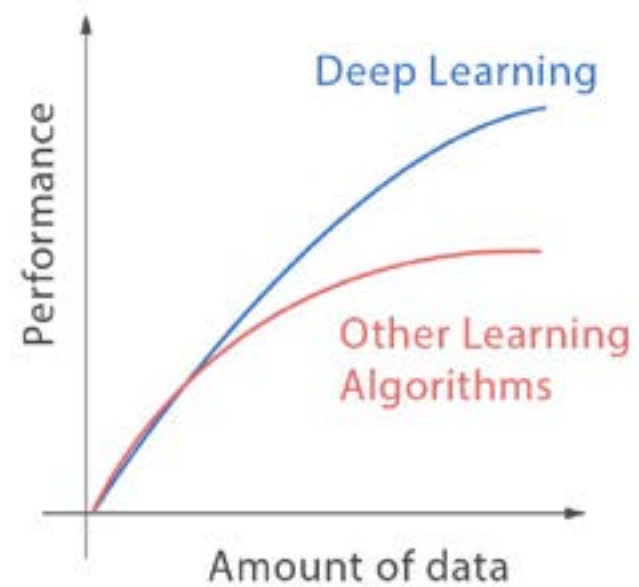


Deep Learning



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 ?



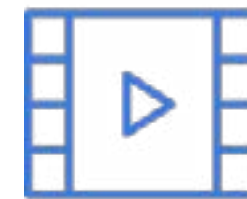
Excel file



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) |

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Unsupervised Learning

| | |
|---|-------------------|
| Clustering | Anomaly Detection |
| Association Rule, labelling each other | Decomposition |

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Other Learning Types

Metric Learning

Semi-Supervised
Learning

Reinforcement
Learning:
Q-Learning

Learning to Rank

Self-Supervised
Learning

Reinforcement
Learning:
Multi-Armed Bandit

Learning to Recommend

**How to make machine learning plan
come to reality?**

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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?



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