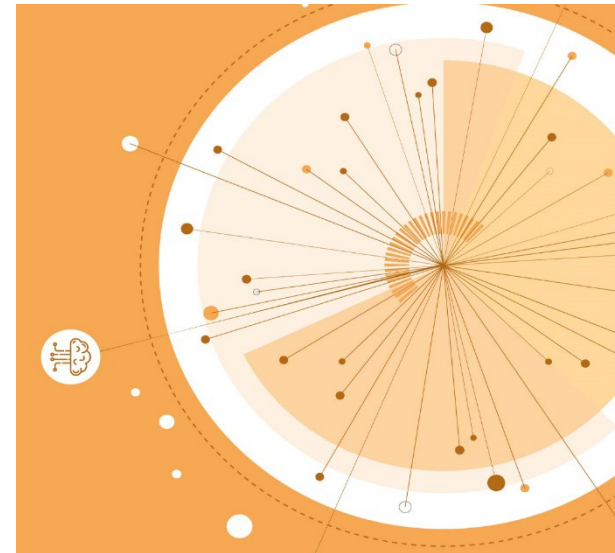


# Intelligence Augmentée dans nos PME

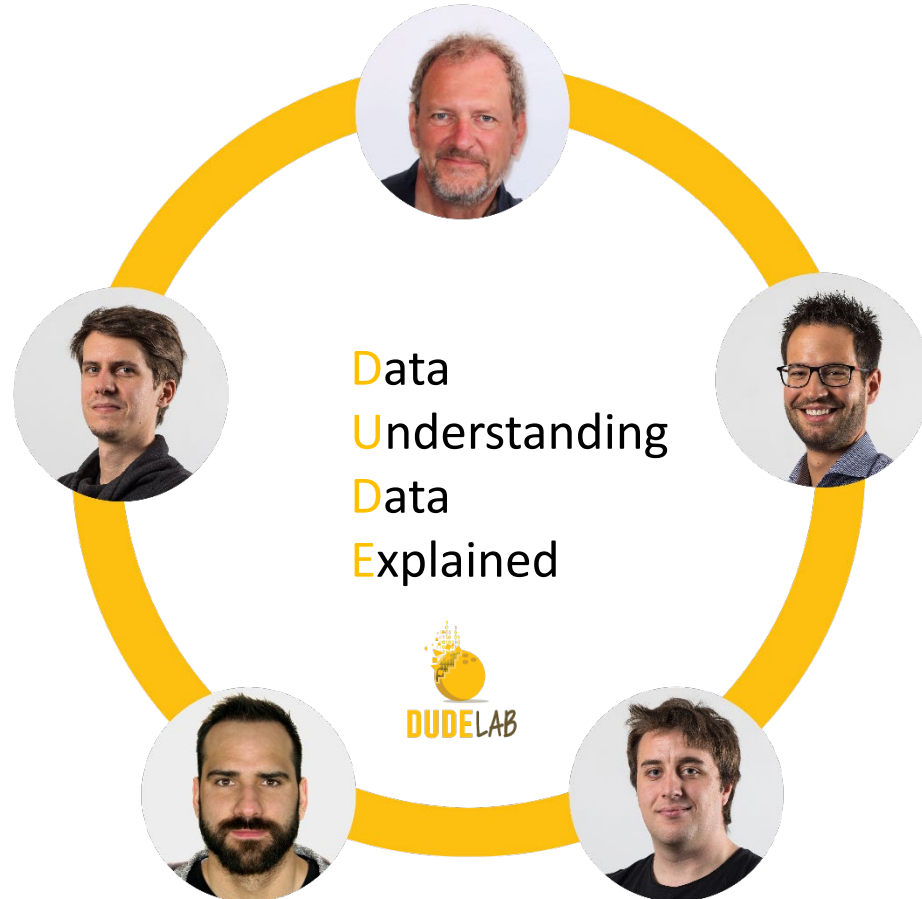
Sierre, 31 Janvier 2020

DUDE-LAB // IIG – HES-SO // Valais

Dominique Genoud – [dominique.Genoud@hevs.ch](mailto:dominique.Genoud@hevs.ch)



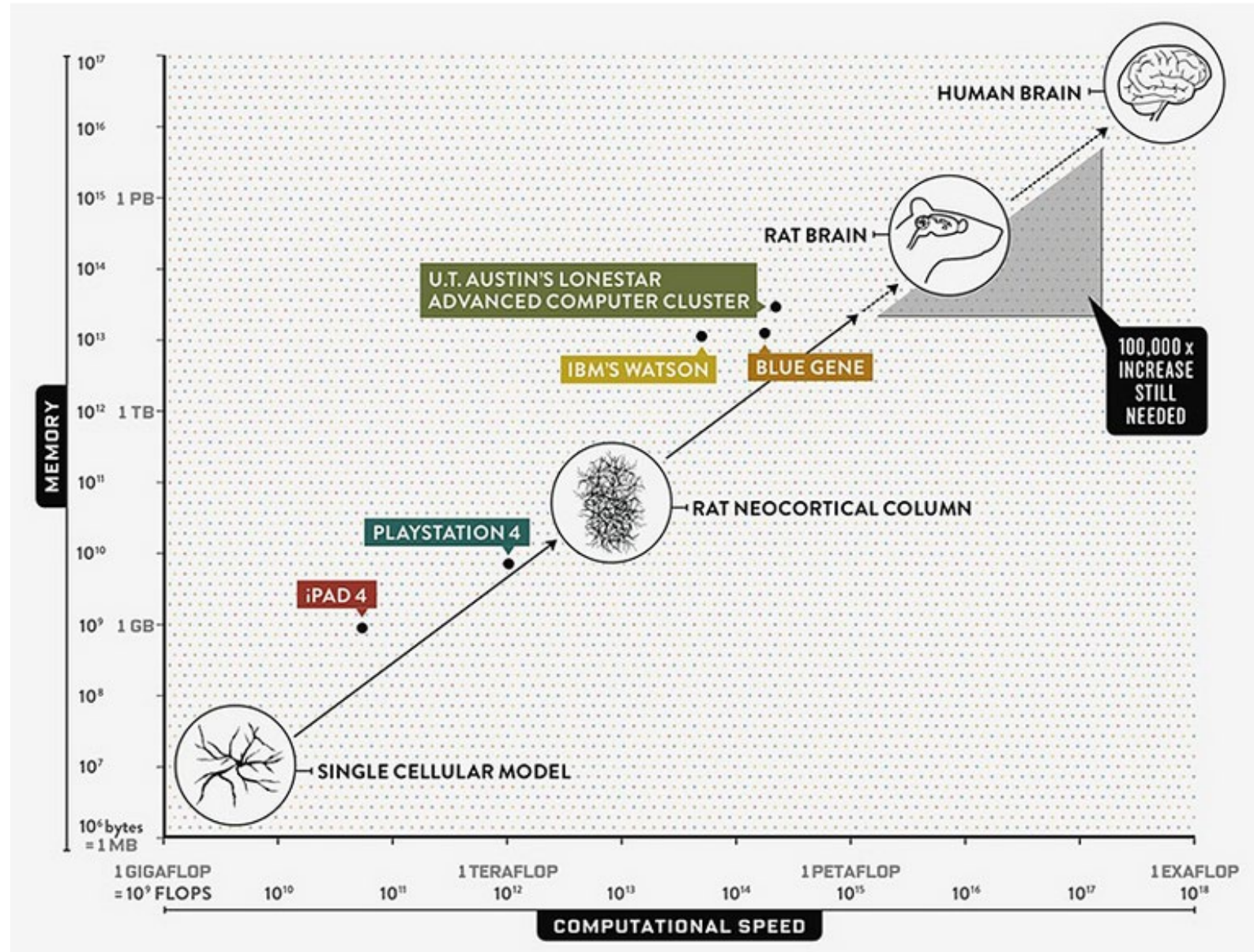
# Who's that guy



- $\Sigma$  Haute Ecole de Gestion : Sierre
- $\pi$  Haute Ecole d'Ingénierie : Sion

IIG : institut informatique de gestion  
 IEE: Institut énergie et environnement

# Intelligence Artificielle/Augmentée dans les PME



## Homme -> Machine

### Intelligence naturelle

Etablir des règles de décision

Apprendre par l'observation

Continuer à apprendre et s'adapter



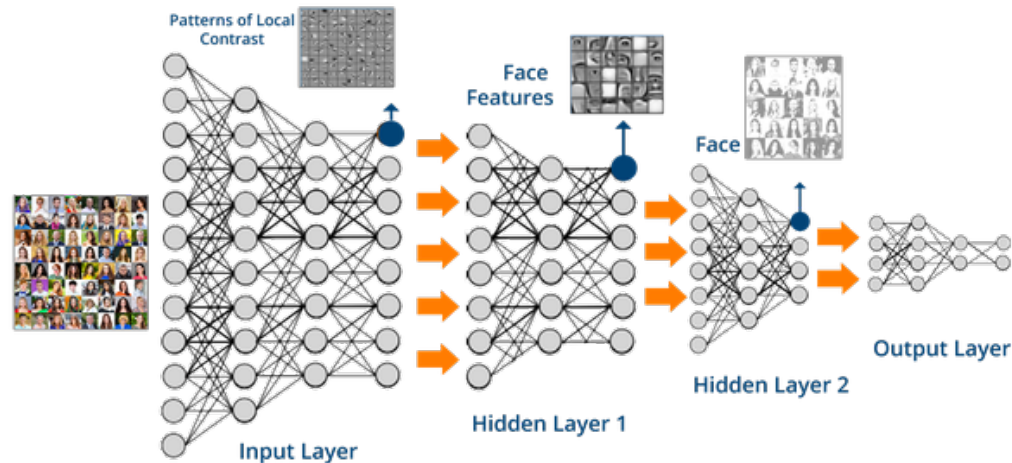
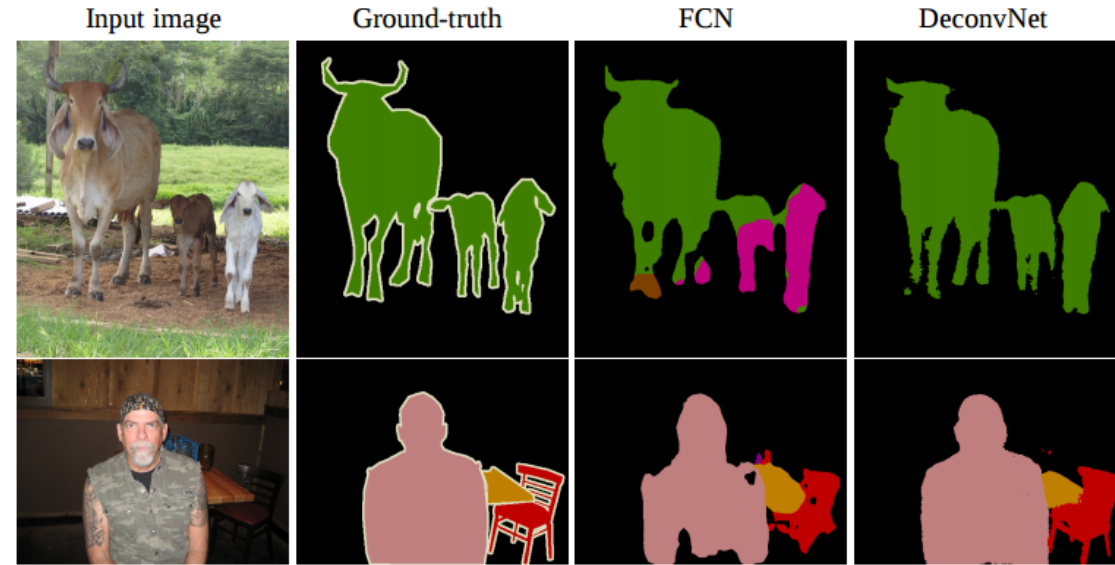
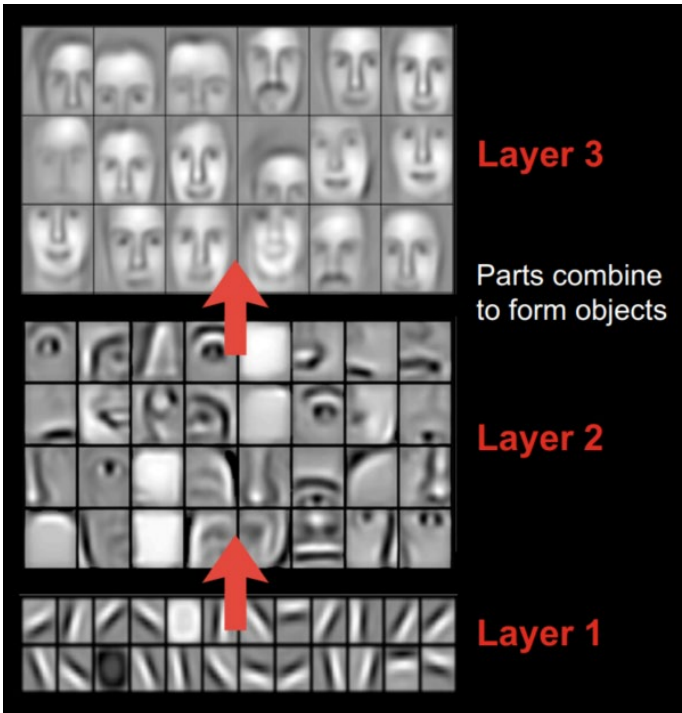
### Intelligence artificielle

Système experts

Machine learning

Reinforcement learning

# Imiter notre cerveau : AI /deep learning



# Données

*Collection, extraction, nettoyage des données*

# Data mining

*Modélisation de la réalité à partir des données (grouper, classer, prédire)*

# Machine learning

*Mettre ensemble plusieurs systèmes image, son, langue, autres capteurs*

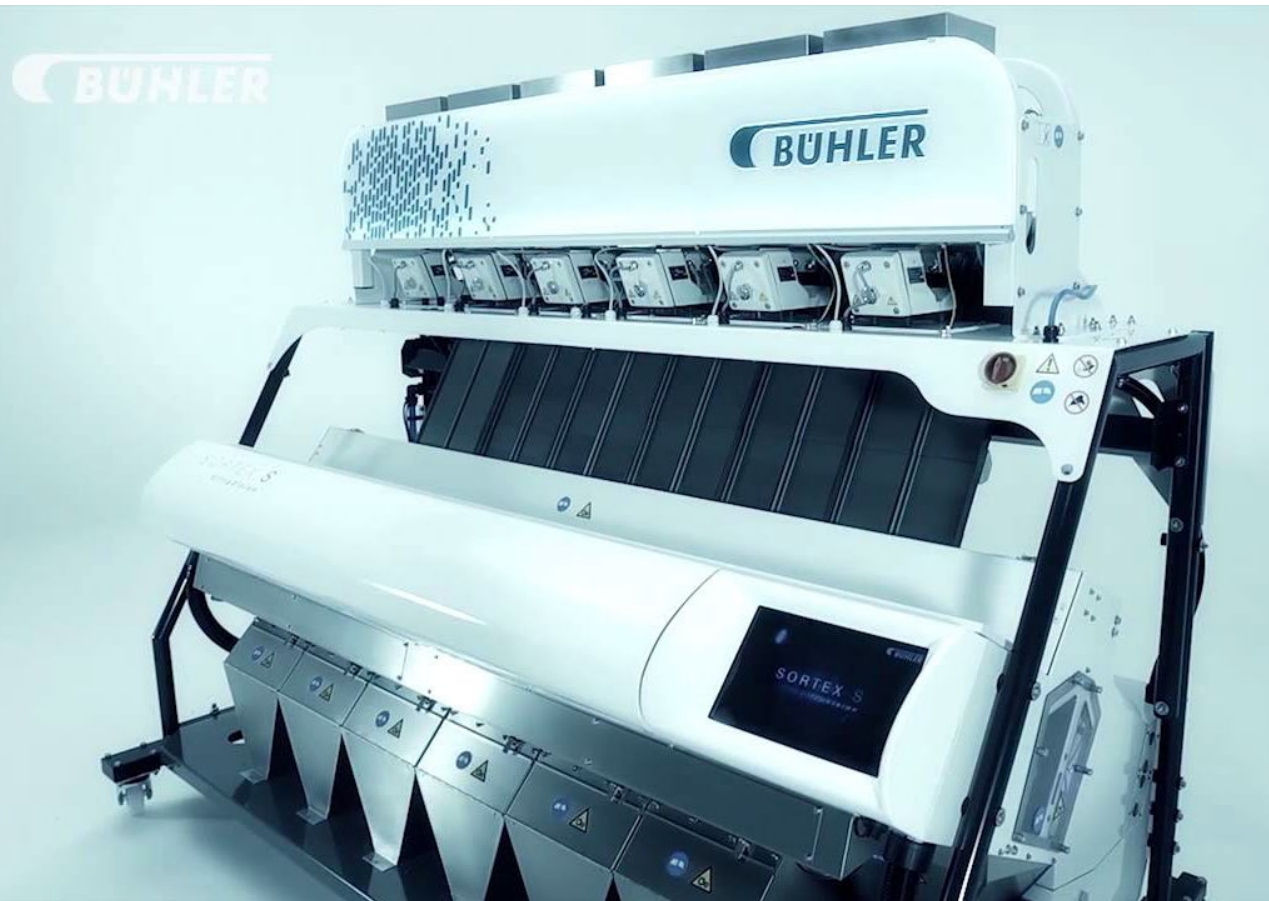
# Intelligence Artificielle

Apprendre de ses erreurs

EXPERT HUMAIN

EXPERT HUMAIN

EXPERT HUMAIN

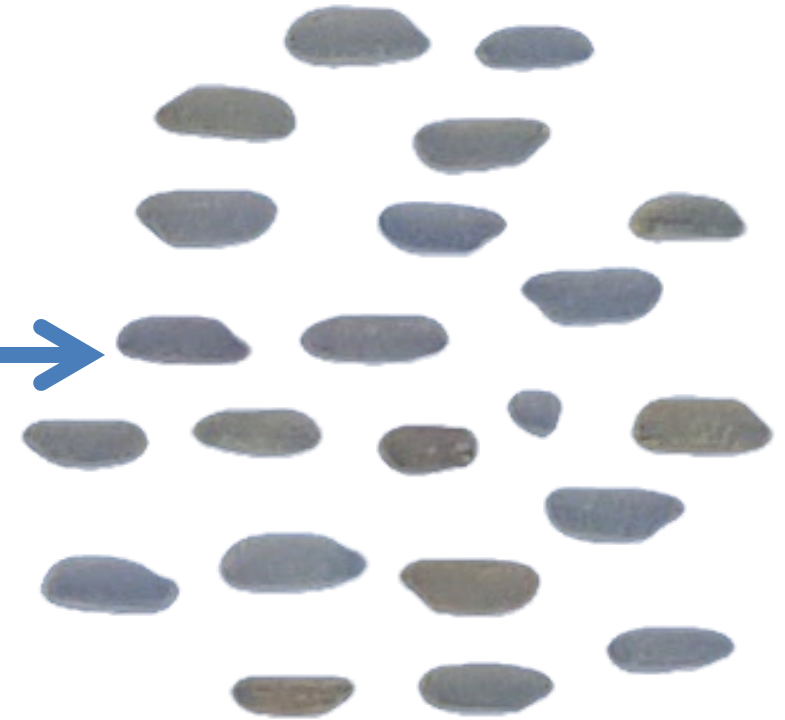
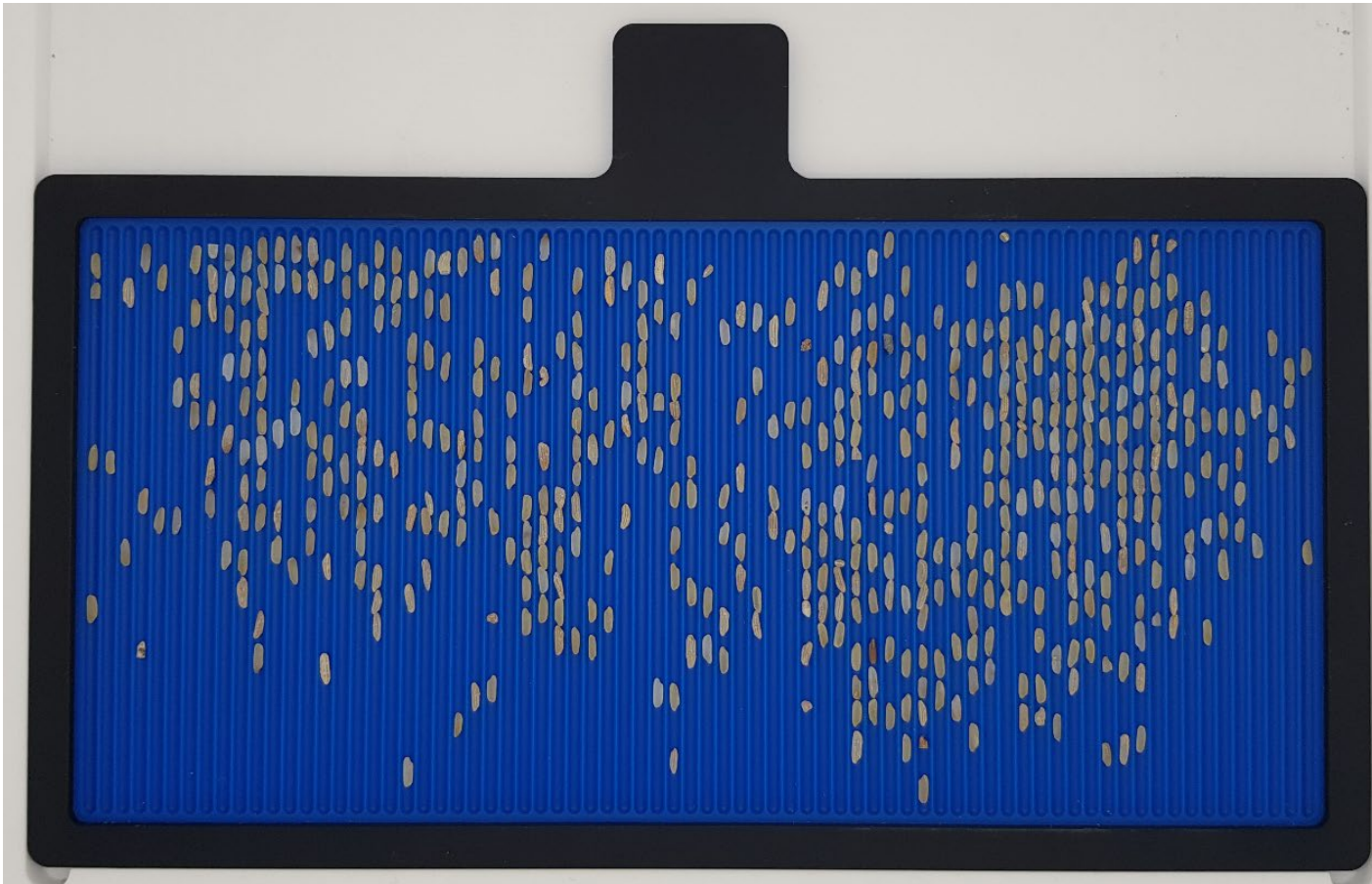


Sorts up to 20 tons per hour → up to 40% of good grains spared  
Rice supplies half of the world needs for food



120'000 rice varieties





Solution conventionnelle: couleur, taille, beaucoup de mise en place manuelle → large variabilité

# L'IA est un outil qui s'insère dans un système d'information

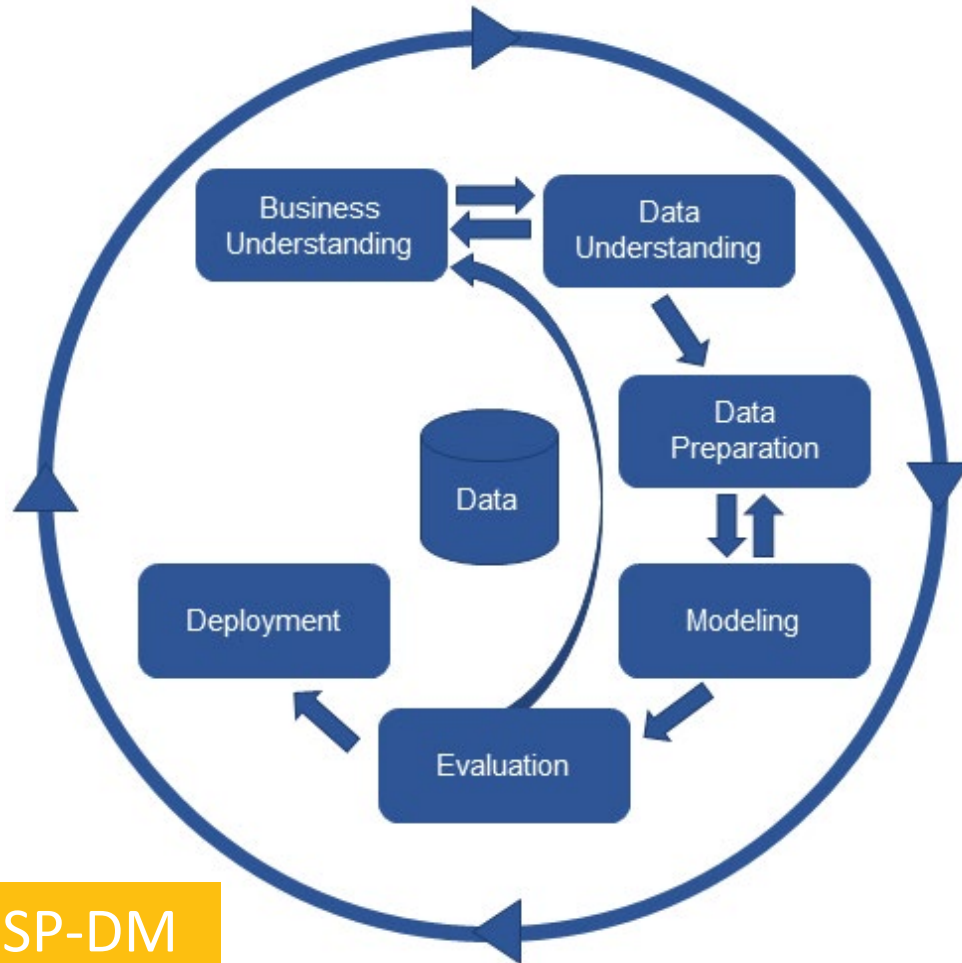
## The growing & evolving Chief Data Officer role






The growing importance of data & analytics has led to the evolution of the Chief Data Officer (CDO) role



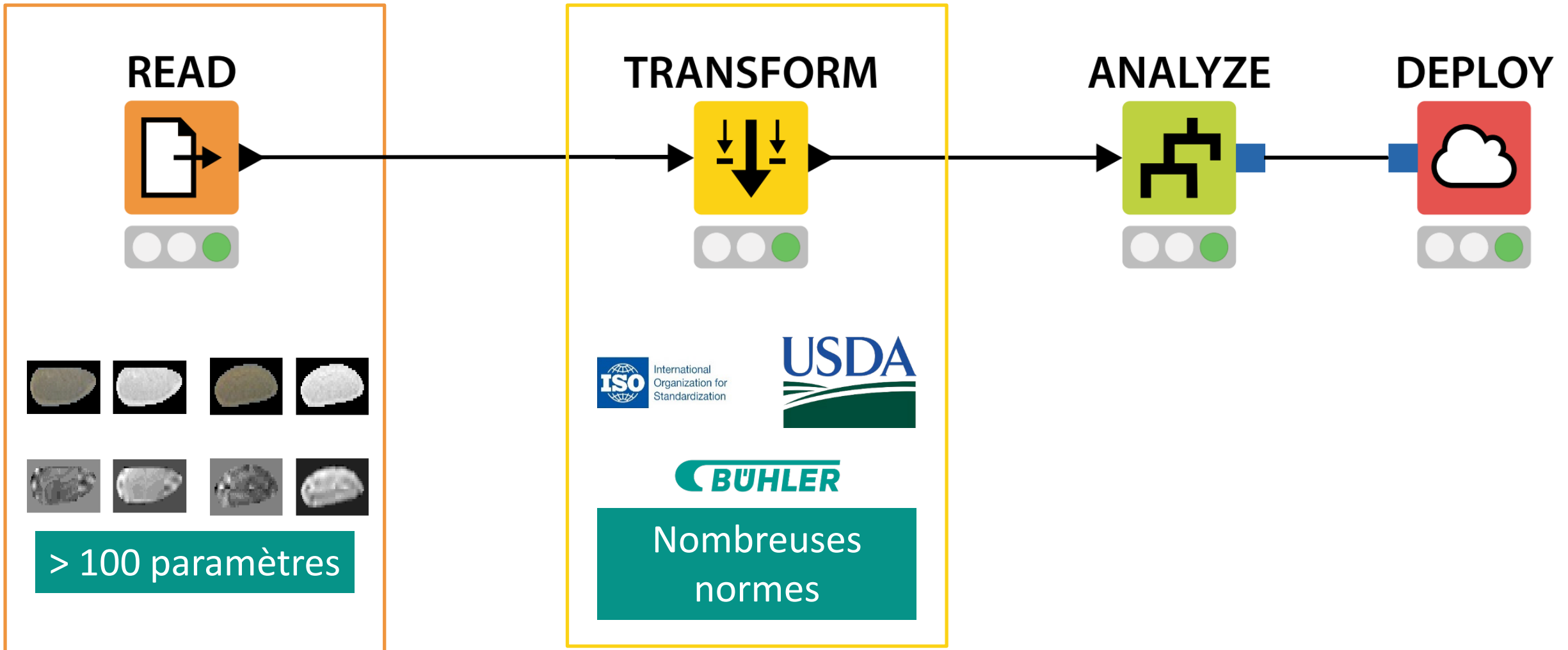
Everest Group® Enterprise Digital Adoption in Retail | Pinnacle Model™ Assessment 2018

# Machine learning Methodology



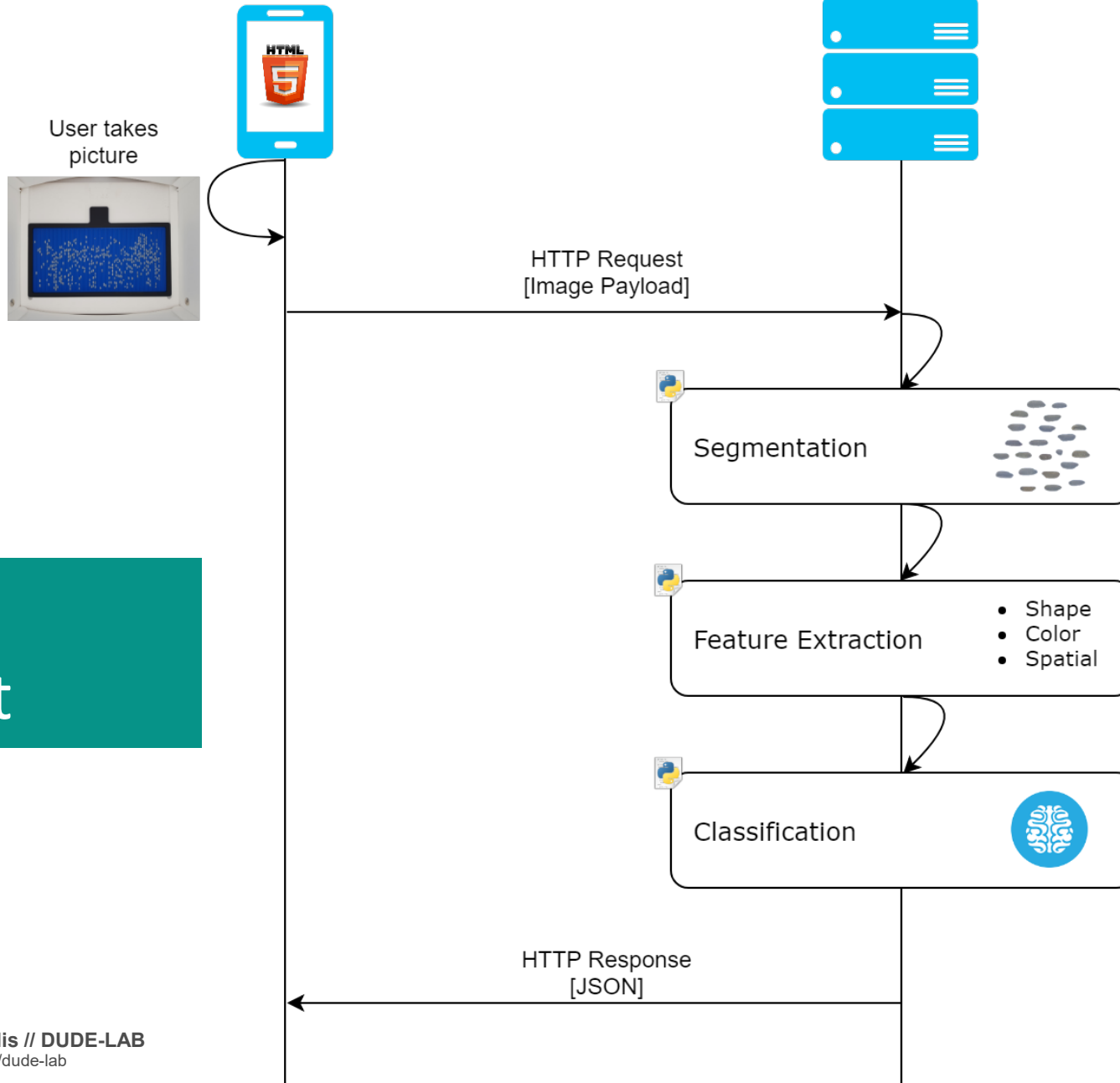
Iteration	Opérations	Externe /Interne
1	Data 90%	 50
2	Modèle 50%	 50
3	Evaluation /Deployment 50%	 50
4	Modèle 60% / Data 30%	 30
...	boucle n	 10

CRISP-DM

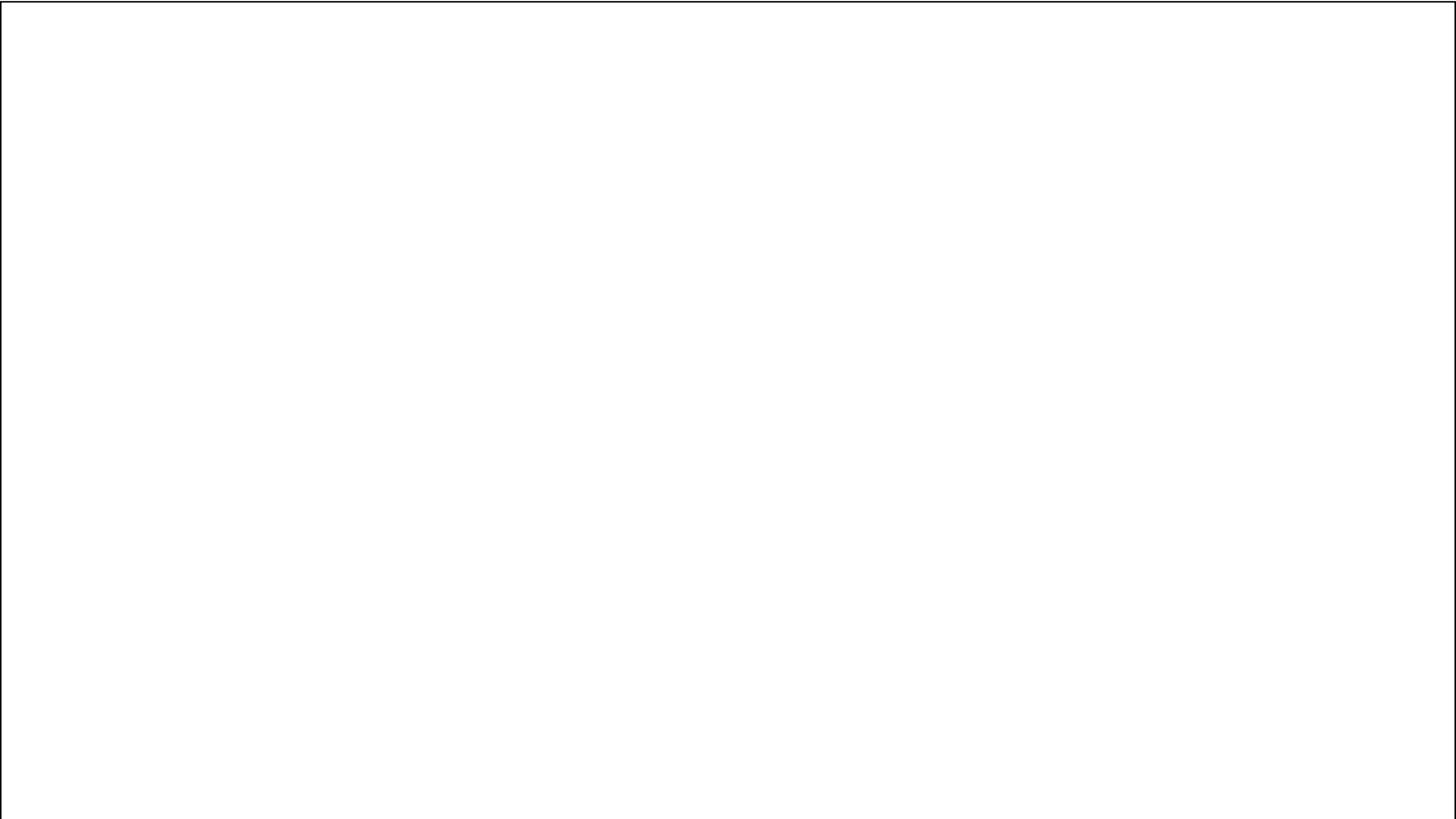


Client  
Smart phone

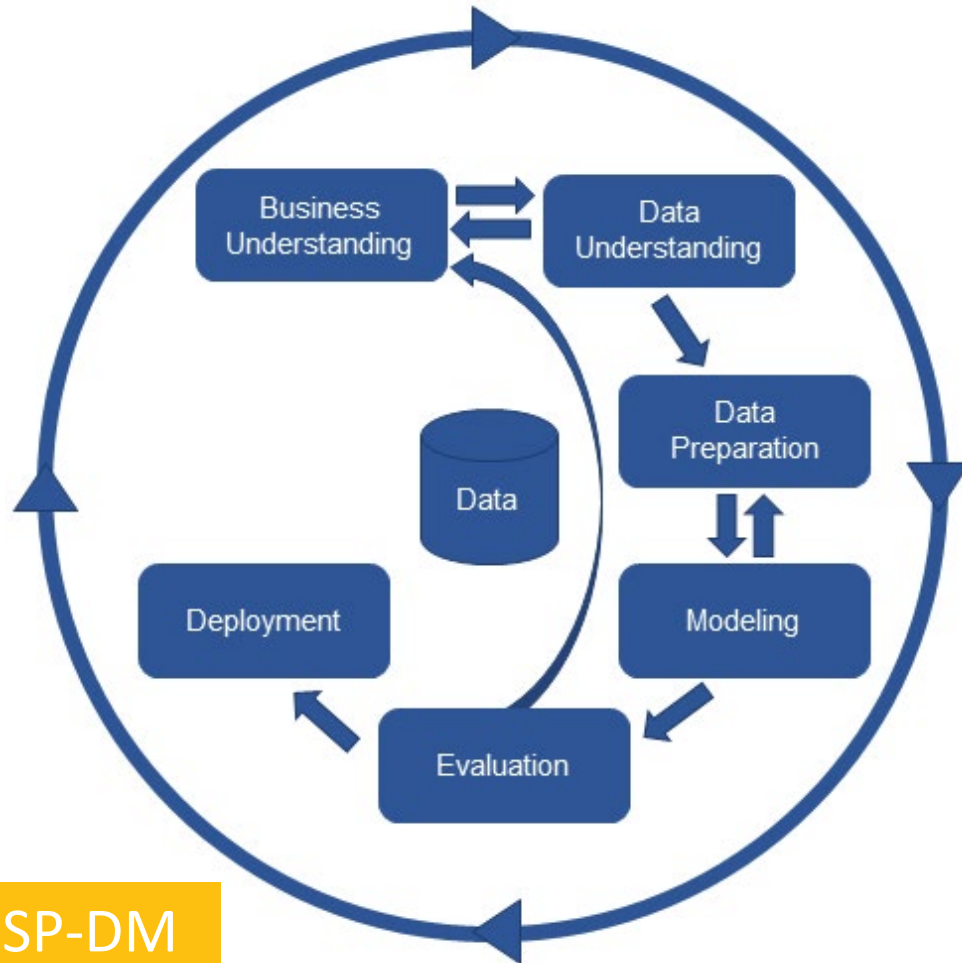
Azure Server



# Phase 1 Entrainement



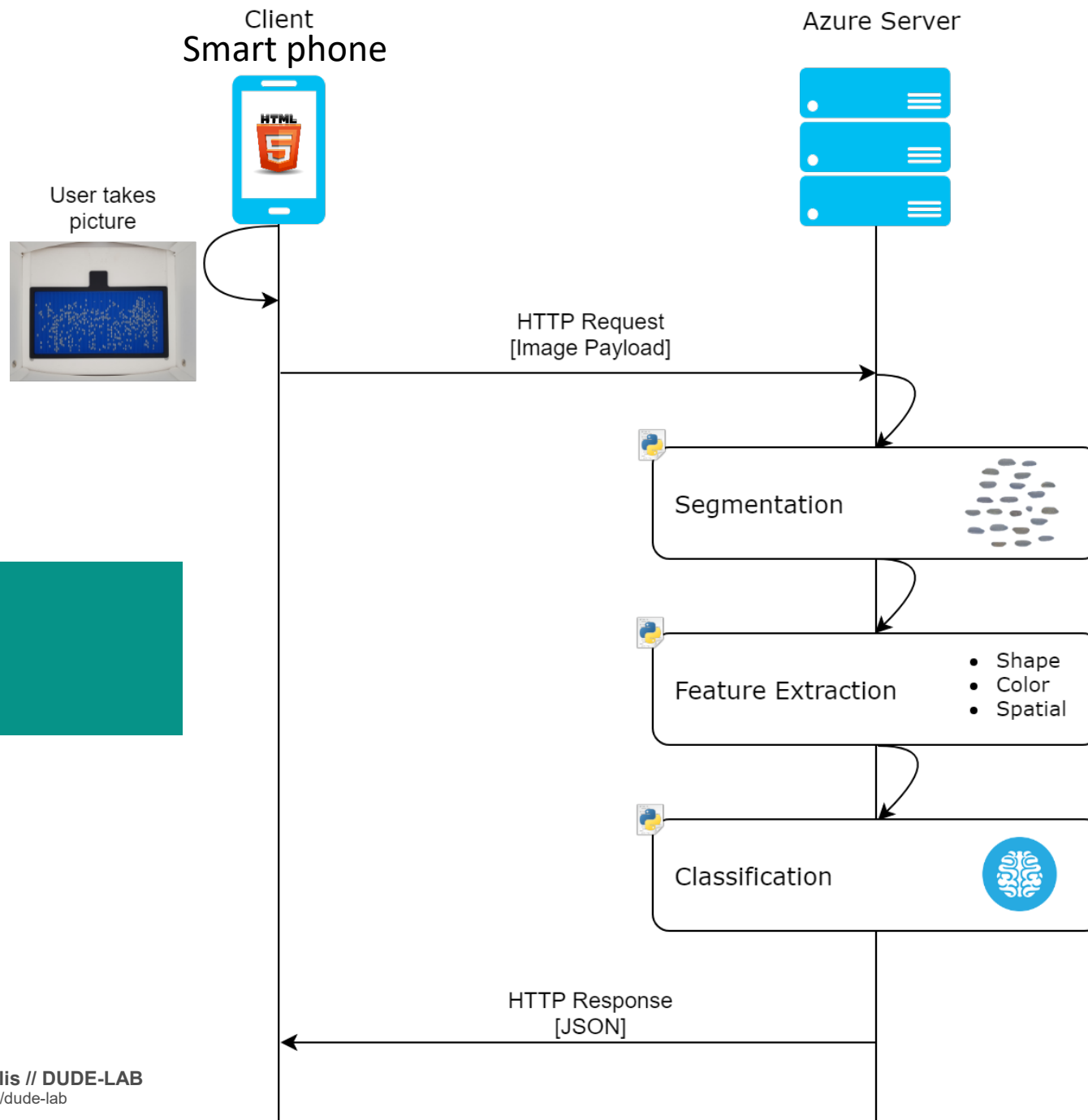
# Active learning



CRISP-DM

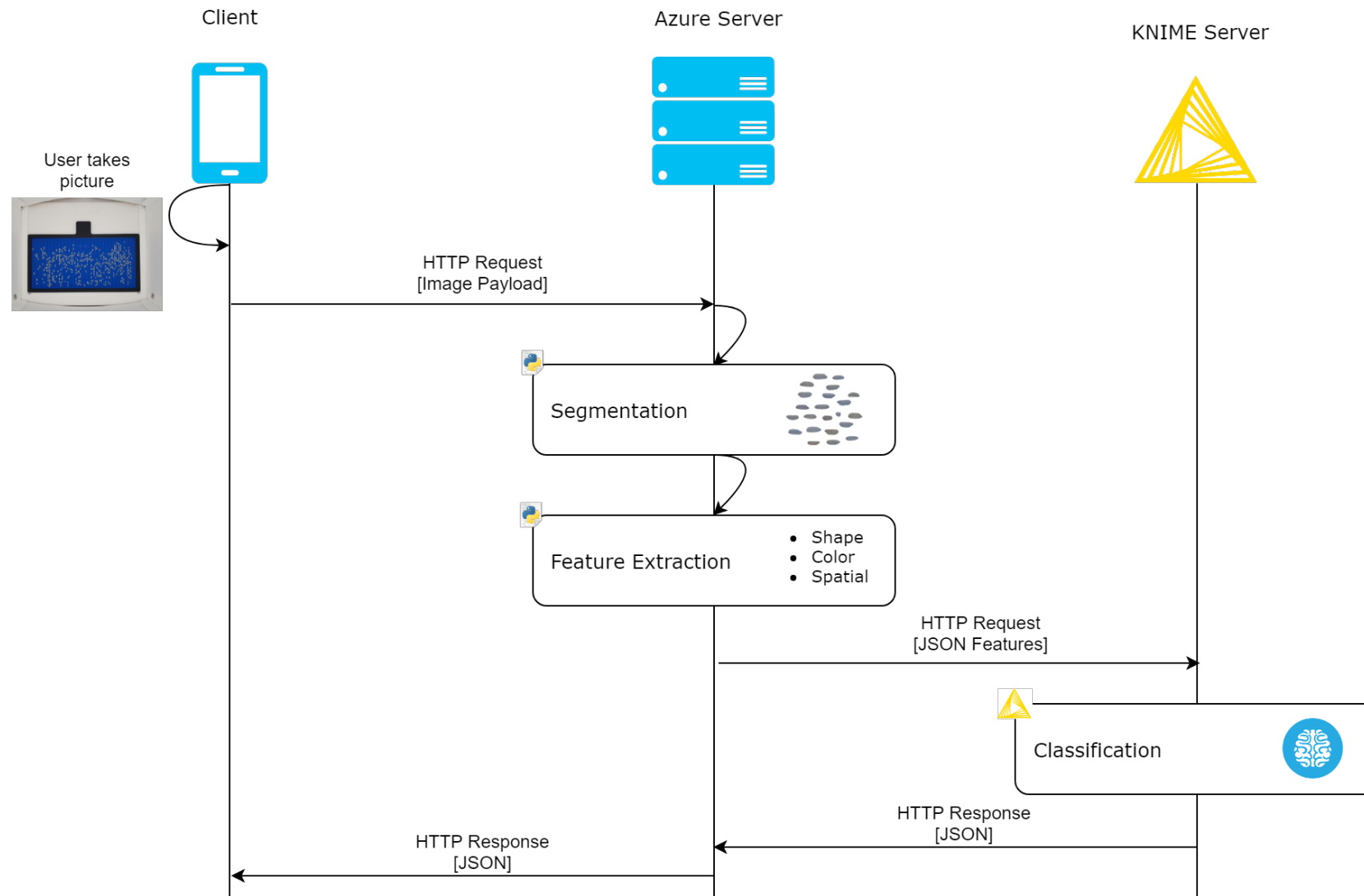
Iteration	Opérations	Externe /Interne
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2	Modèle 50%	<div style="width: 50%; background-color: #f4a460;"></div> 50
3	Evaluation /Deployment 50%	<div style="width: 50%; background-color: #f4a460;"></div> 50
4	Modèle 60% / Data 30%	<div style="width: 30%; background-color: #f4a460;"></div> 30
...	boucle n	<div style="width: 10%; background-color: #f4a460;"></div> 10

# Phase 2: Active learning



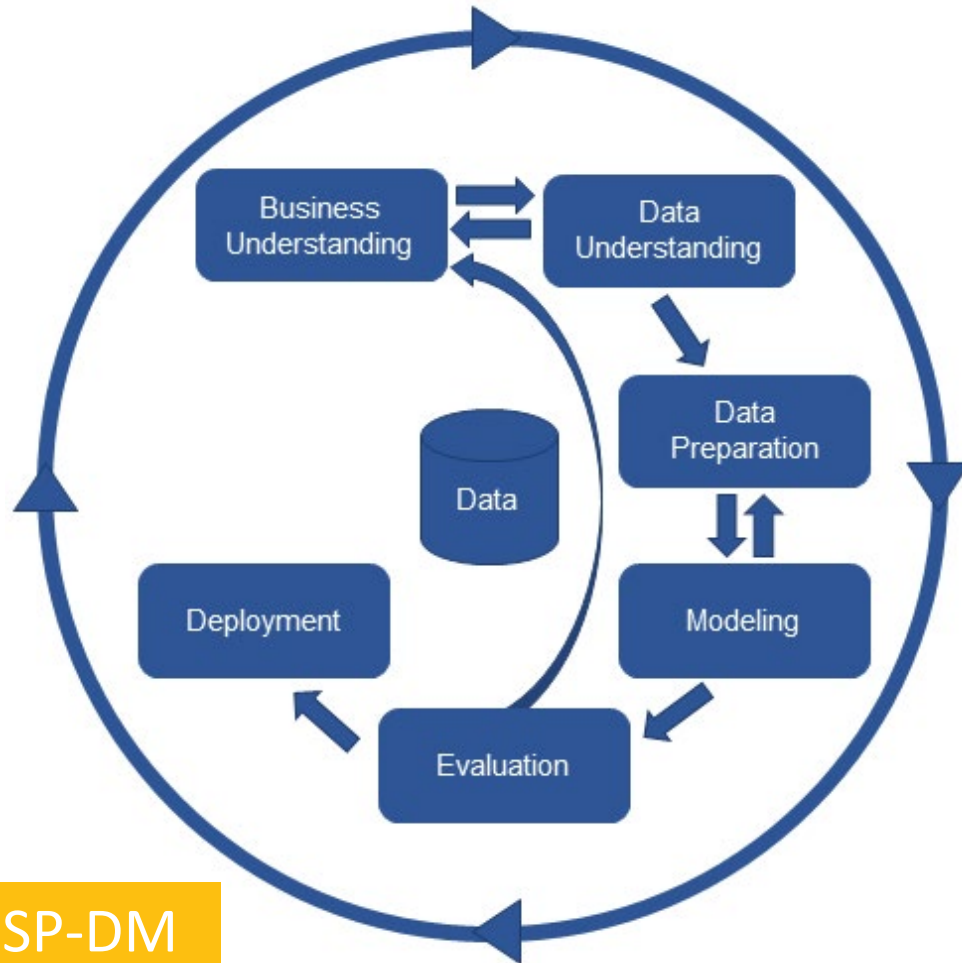






# Déploiement à grande échelle

# Déploiement → par le client chez ses clients



Iteration	Opérations	Externe /Interne
1	Data 90%	50
2	Modèle 50%	50
3	Evaluation /Déploiement 50%	50
4	Modèle 60% / Data 30%	30
...	boucle n	10

CRISP-DM

Thank you for your attention.

Any questions?

