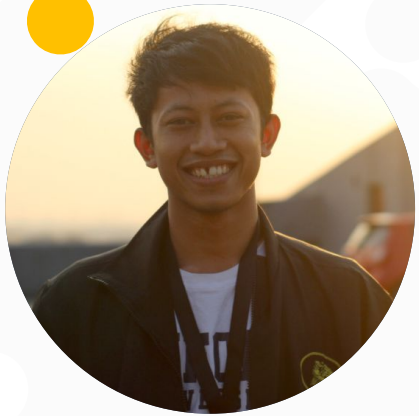
Cultivhacktion



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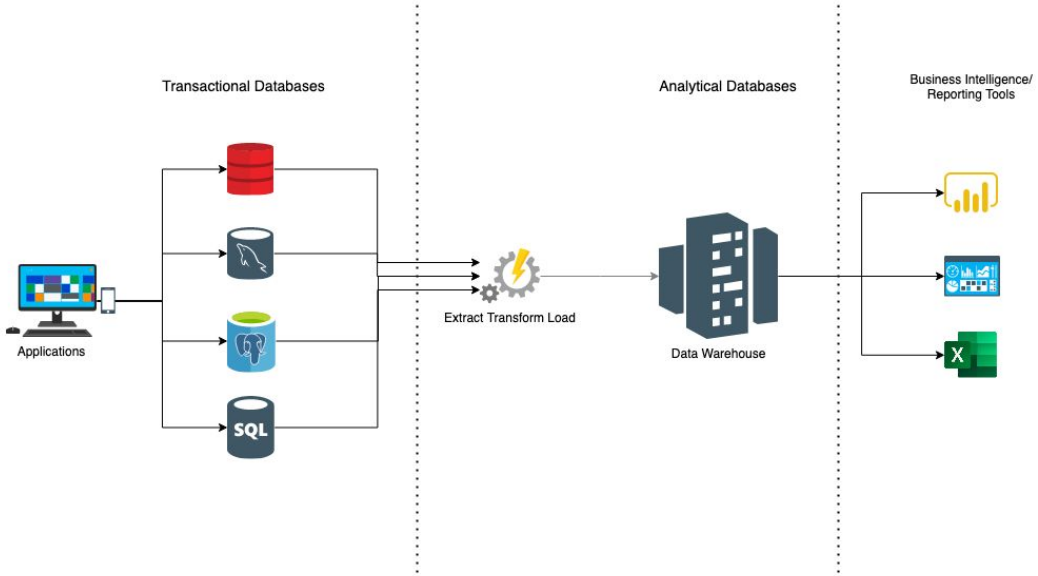
Ali Murtadho

optimazation your model machine learning and deploy with flask

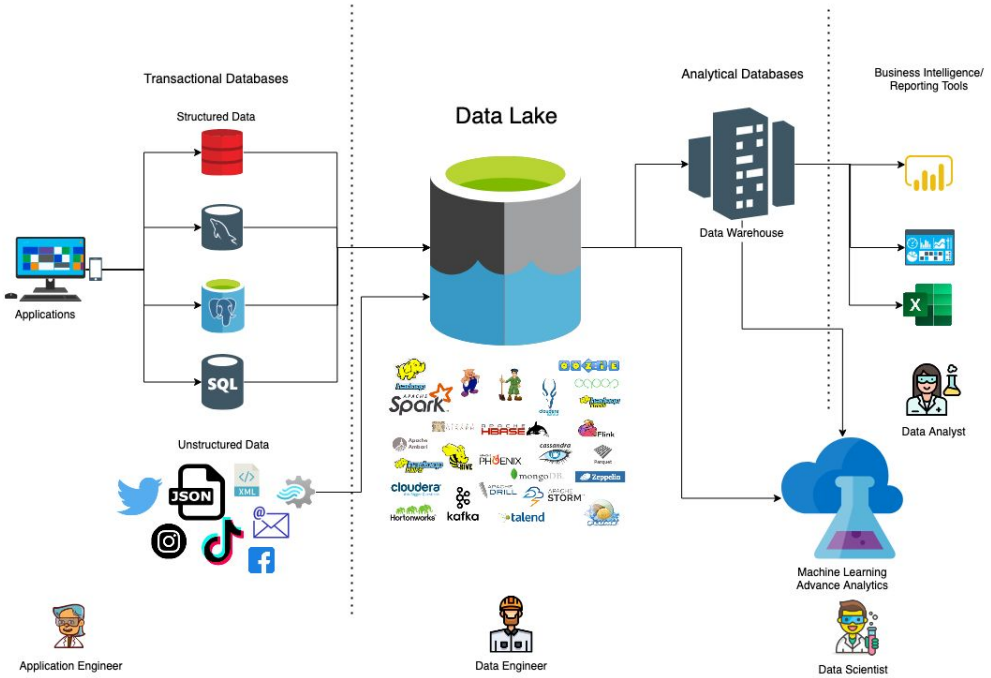
Session will cover :

- Intro to machine learning
- implementation Supervised learning
- optimazation model machine learning
- deploy model machine learning with flask

Data Journey, in a Traditional data architecture:



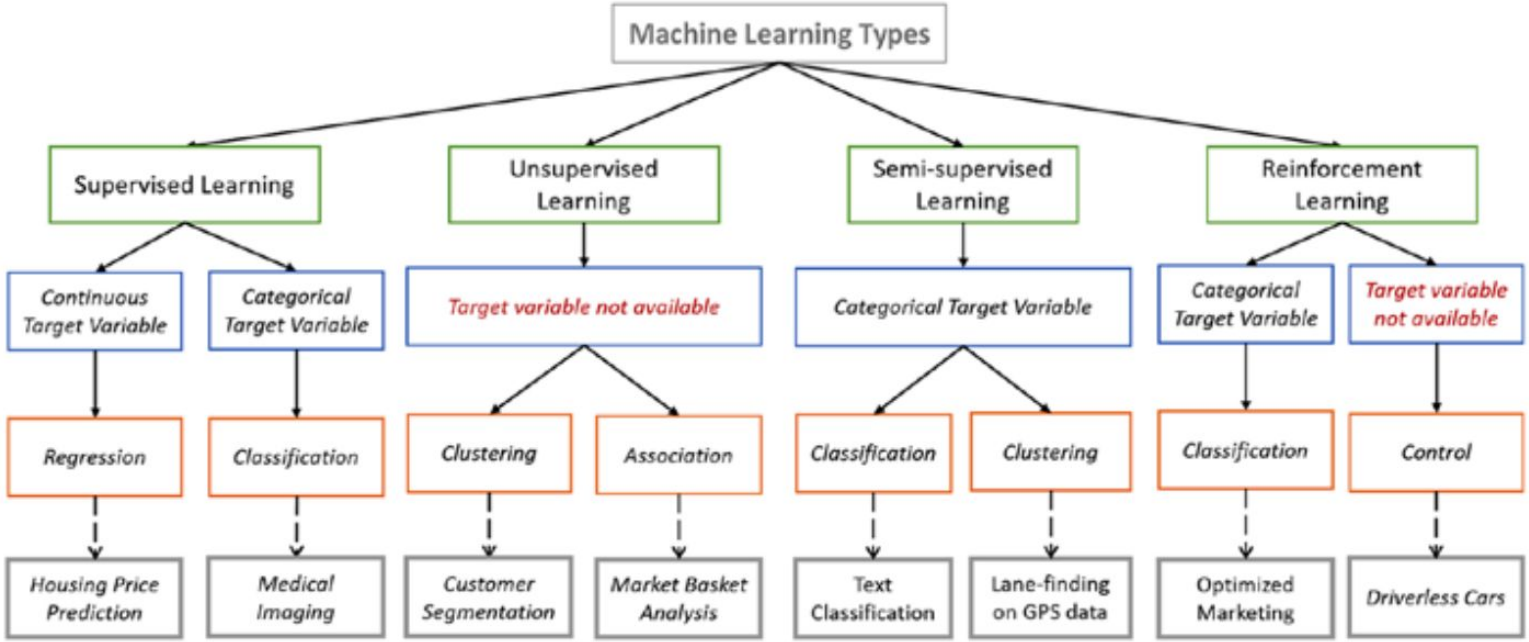
Data Journey, in a Modern data architecture:



So, what is "Machine learning" ?

Machine learning techniques are used to automatically find the valuable underlying patterns within complex data that we would otherwise struggle to discover. The hidden patterns and knowledge about a problem can be used to predict future events and perform all kinds of complex decision making**.

Source :
(https://towardsdatascience.com/machine-learning-an-introduction-23b84d51e6d0)



supervised learning, has two main functions, classification and regression for the method I use is K-NN, Logistic Regression, Decision Tree, Random Forest, Gradient Boosting

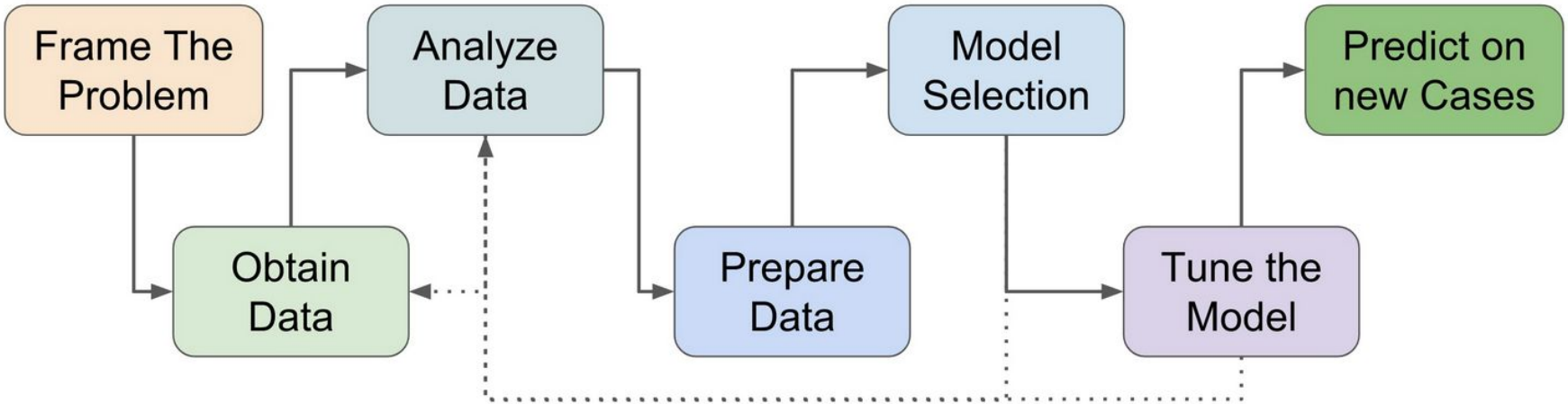
https://www.quora.com/What-are-the-commonly-used-Machine-Learning-Algorithms-one-has-to-know-when-working-with-R-or-Python

Overview Dataset Pima-Indian-diabetes

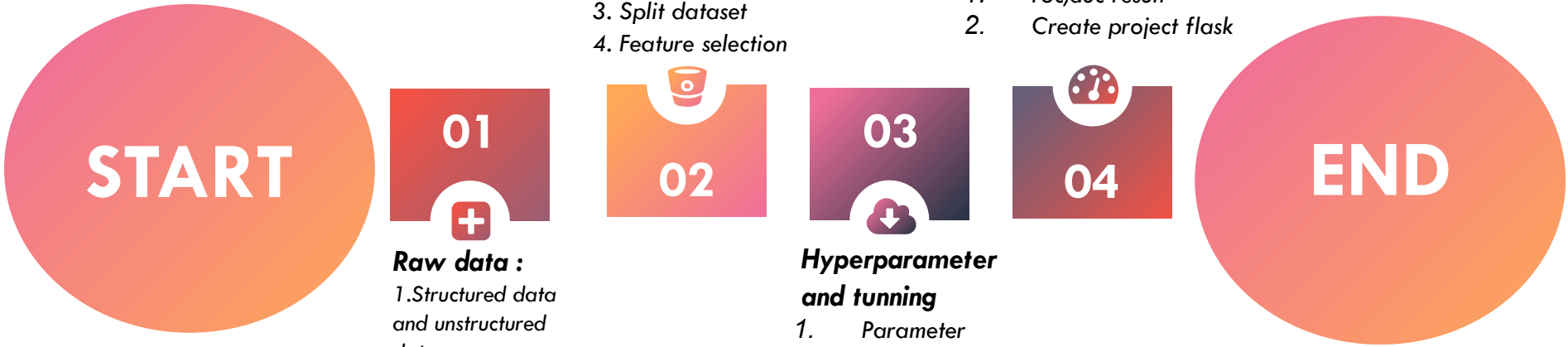
Pregnancies	Glucose	BloodPressure	SkinThickness	Insulin	BMI	DiabetesPedigreeFunction	Age	Outcome
6	148	72	35	0	33.6	0.627	50	1
1	85	66	29	0	26.6	0.351	31	0
8	183	64	0	0	23.3	0.672	32	1
1	89	66	23	94	28.1	0.167	21	0
0	137	40	35	168	43.1	2.288	33	1
5	116	74	0	0	25.6	0.201	30	0
3	78	50	32	88	31	0.248	26	1
10	115	0	0	0	35.3	0.134	29	0
2	197	70	45	543	30.5	0.158	53	1
8	125	96	0	0	0	0.232	54	1
4	110	92	0	0	37.6	0.191	30	0
10	168	74	0	0	38	0.537	34	1
10	139	80	0	0	27.1	1.441	57	0
1	189	60	23	846	30.1	0.398	59	1
5	166	72	19	175	25.8	0.587	51	1
7	100	0	0	0	30	0.484	32	1
0	118	84	47	230	45.8	0.551	31	1
7	107	74	0	0	29.6	0.254	31	1
1	103	30	38	83	43.3	0.183	33	0
1	115	70	30	96	34.6	0.529	32	1

https://www.kaggle.com/uciml/pima-indians-diabetes-database/

End-to-End Supervised Machine Learning



ESSENTIAL LEARNING PROCESS TO DEVELOP A MODEL



Raw data :

1.Structured data and unstructured data
2. Overview data

Feature Extraction :

1.Data preprocesing
2. Scaling feature
3. Split dataset
4. Feature selection

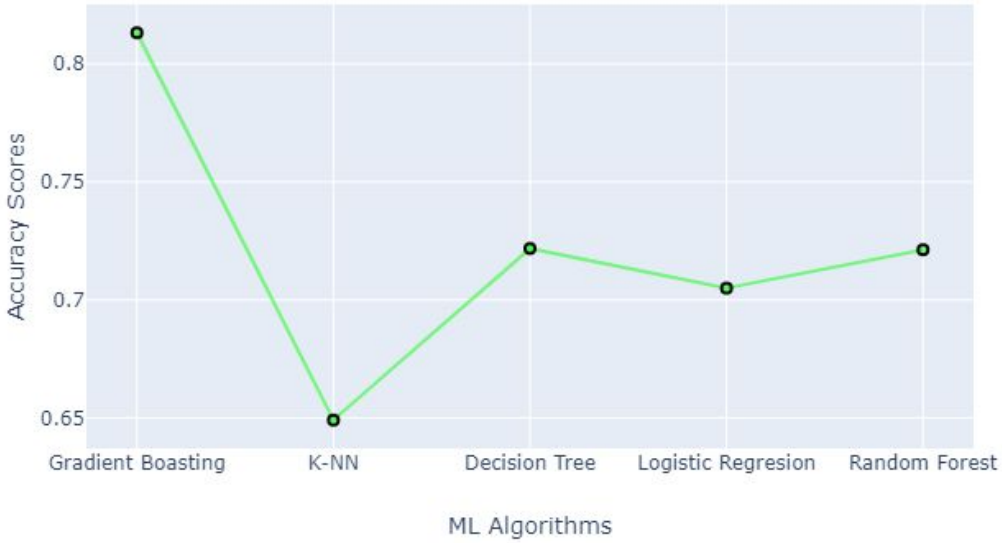
Hyperparameter and tunning

1. *Parameter evalution*
2. *Adjusting thereshold*
3. *Build model and validation*

Cunfusion matrik and Result acuration

1. *roc,auc result*
2. *Create project flask*

Ploty result compare



Why Flask

python

Flask

web development,
one drop at a time

Why Flask

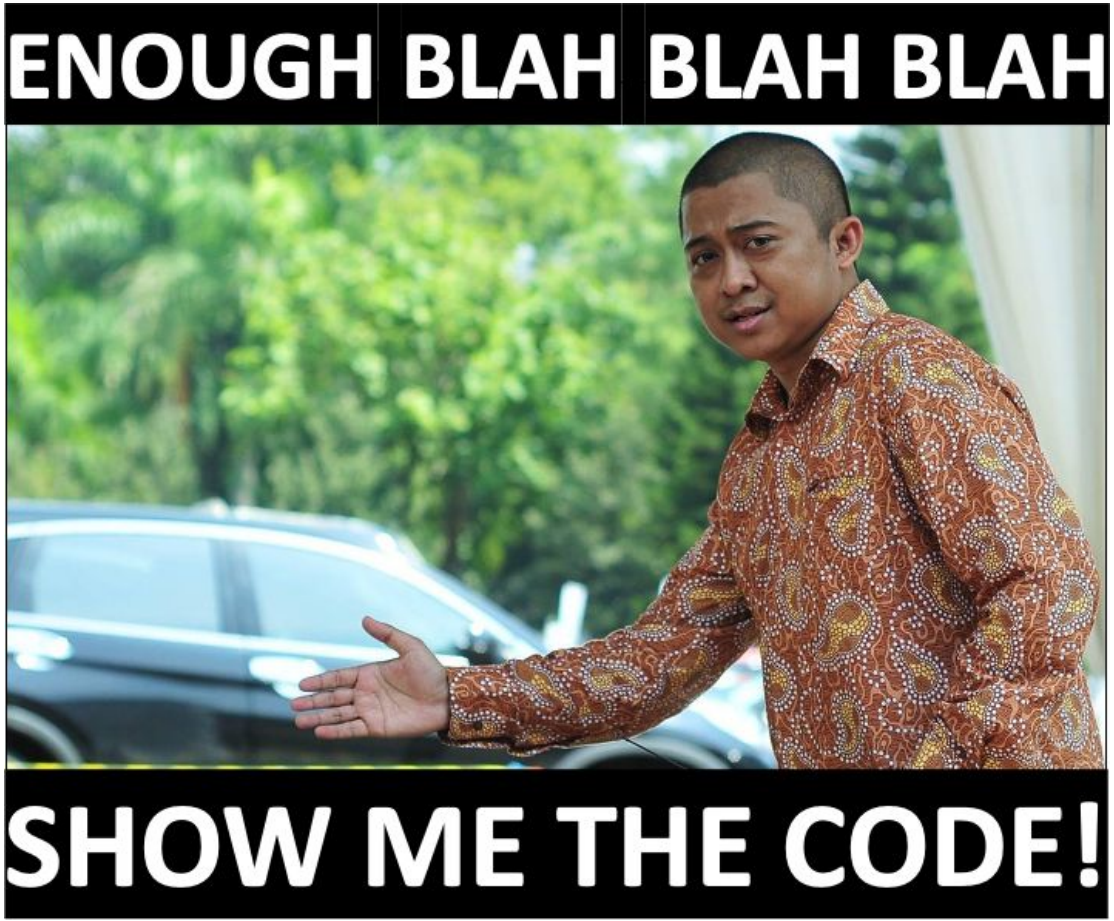
1.Flask is a framework that is suitable for beginners

2.Using Flask for web development allows you to do unit tests through integrated support, built-in development server, fast debugger and RESTful requests

3.Flexible, Flask is a simple and minimalist framework, so almost all parts of Flask can be opened and modified unlike some other frameworks

Flask is ideal for Machine learning Engineers or developers who want to quickly prototype web applications and build APIs easily and quickly.

Let's to coding



Thank you

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