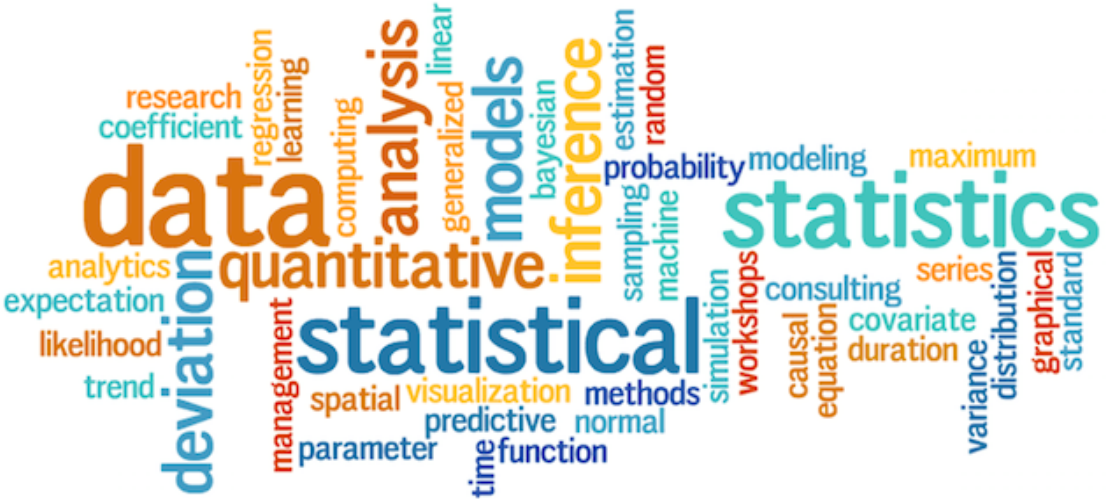
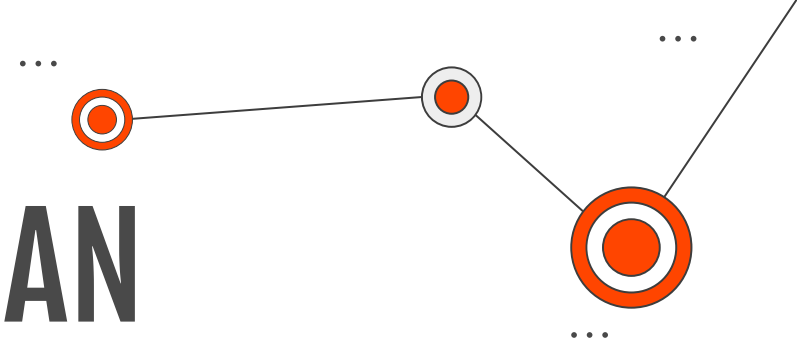
DATA SCIENCE
DALAM RUANG LINGKUP
MAHASISWA

Muhammad Fahmi



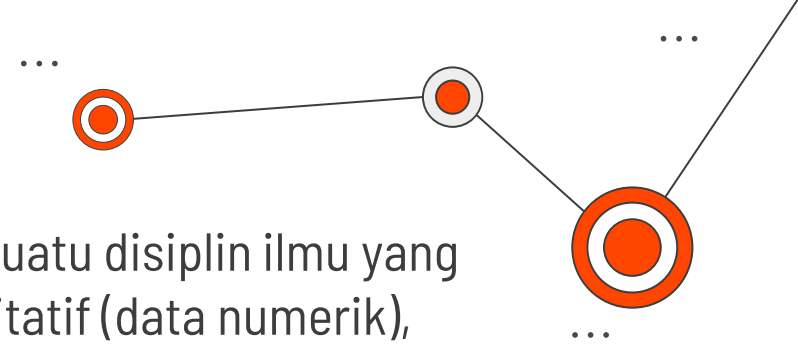
Muhammad Fahmi
Teknik Informatika - Politeknik Pos Indonesia, Bandung

Jul 2020 -	Freelance Data Scientist
Mar 2021 -	Lead Data Scientist at Kebunpintar.Id
Feb - Jul 2021	Student Ambassador Bisa Ai (Pemateri)
2020- 2021	Data Scientist at Telkom Bandung
Now -	Founder at Intelligo.id



SUDAH KENAL DENGAN DATA SCIENCE ?

APA ITU DATA SCIENCE ?

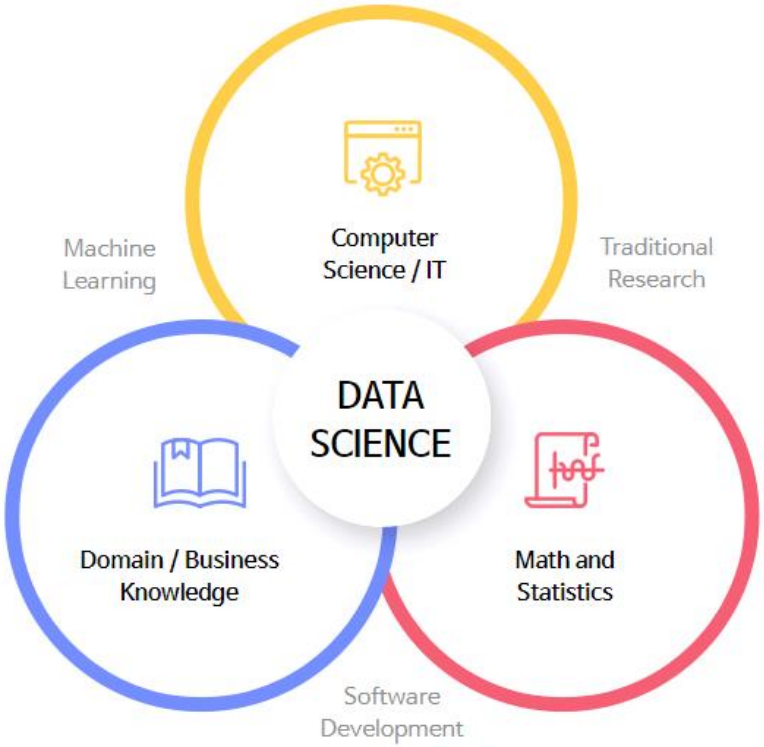


Ilmu data (bahasa Inggris: data science) adalah suatu disiplin ilmu yang khusus mempelajari data, khususnya data kuantitatif (data numerik), baik yang terstruktur maupun tidak terstruktur.

Ilmu data merupakan kombinasi dari ilmu sains dan ilmu sosial. Ilmu-ilmu yang menjadi penunjang utama dalam ilmu data terdiri dari matematika, statistika, ilmu komputer, sistem informasi, manajemen, ilmu informasi, termasuk juga ilmu komunikasi dan ilmu perpustakaan, kearsipan, dan dokumentasi.

Bahkan ilmu ekonomi, terutama ilmu bisnis, juga berperan penting dalam ilmu data.

Sumber : Wikipedia


Machine Learning
Computer Science / IT
Traditional Research
DATA SCIENCE
Domain / Business Knowledge
Math and Statistics
Software Development

Jurusan yang Paling diincar untuk Profesi Data Science

- STATISTIK
- INFORMATIKA
- MATEMATIKA
- ILMU KOMUNIKASI
- EKONOMI
- DAN JURUSAN LAINNYA

The Future of Jobs Report 2020
Sumber : world economic forum

"Ins" and "outs"

The demand for some jobs will rise over the next five years, while for others it will shrink.

Increasing demand		Decreasing demand	
1	Data analysts and scientists	1	Data entry clerks
2	AI and machine learning specialists	2	Administrative and executive secretaries
3	Big data specialists	3	Accounting, bookkeeping, and payroll clerks
4	Digital marketing and strategy specialists	4	Accountants and auditors
5	Process automation specialists	5	Assembly and factory workers
6	Business development professionals	6	Business services and administration managers
7	Digital transformation specialists	7	Client information and customer services workers
8	Information security analysts	8	General and operations managers
9	Software and applications developers	9	Mechanics and machinery repairers
10	Internet of things specialists	10	Material-recording and stock-keeping clerks

01
BUSINESS UNDERSTANDING
Ask relevant questions and define objectives for the problem that needs to be tackled.
02
DATA MINING
Gather and scrape the data necessary for the project.
03
DATA CLEANING
Fix the inconsistencies within the data and handle the missing values.
04
DATA EXPLORATION
Form hypotheses about your defined problem by visually analyzing the data.
05
FEATURE ENGINEERING
Select important features and construct more meaningful ones using the raw data that you have.
06
PREDICTIVE MODELING
Train machine learning models, evaluate their performance, and use them to make predictions.
07
DATA VISUALIZATION
Communicate the findings with key stakeholders using plots and interactive visualizations.
DATA SCIENCE LIFECYCLE
sudeep.co

Data Scientist

also known as Data Managers, statisticians.

A data scientist will be able to take data science projects from end to end. They can help store large amounts of data, create predictive modelling processes and present the findings.

Skills: Mathematics, Programming, Communication

Will use programmes such as:

SQL, Python, R

Data Engineers

also known as database administrators and data architects.

They are versatile generalists who use computer science to help process large datasets. They typically focus on coding, cleaning up data sets, and implementing requests that come from data scientists.

Skills: Programming, Mathematics, Big data

Will use programmes such as:

Hadoop, NoSQL, and Python

Data Analysts

also known as business Analysts.

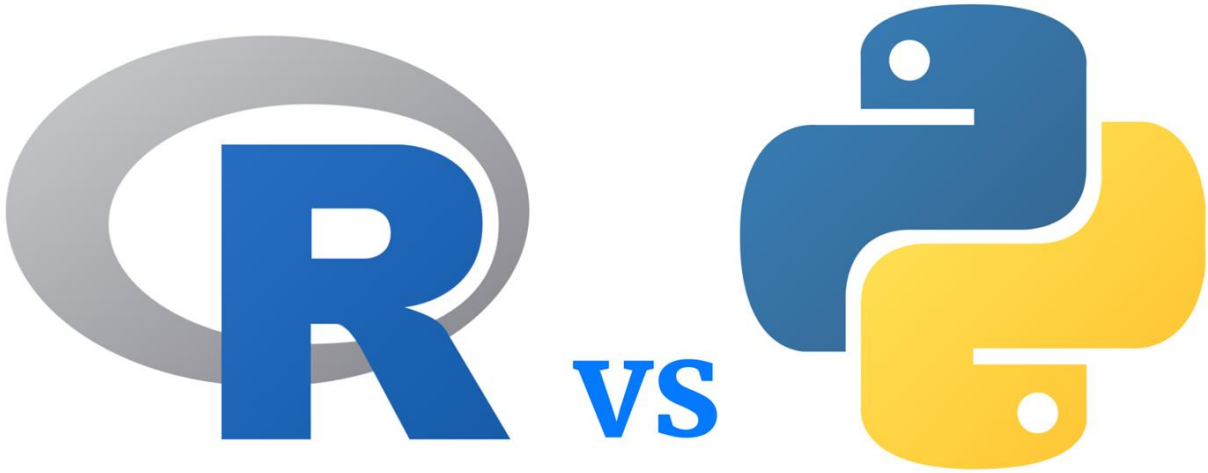
They typically help people from across the company understand specific queries with charts.

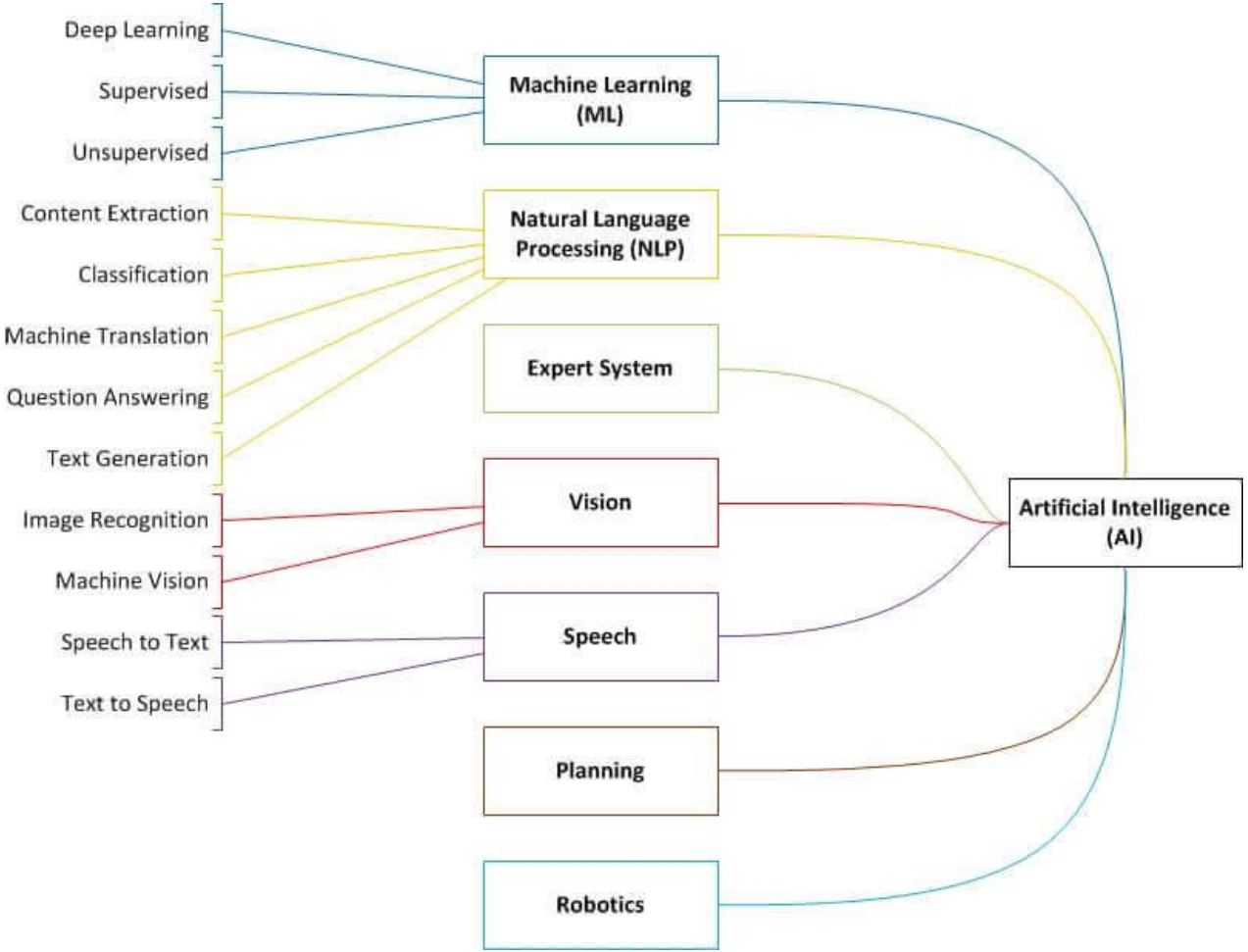
Skills: Statistics, Communication, Business knowledge

Will use programmes such as:

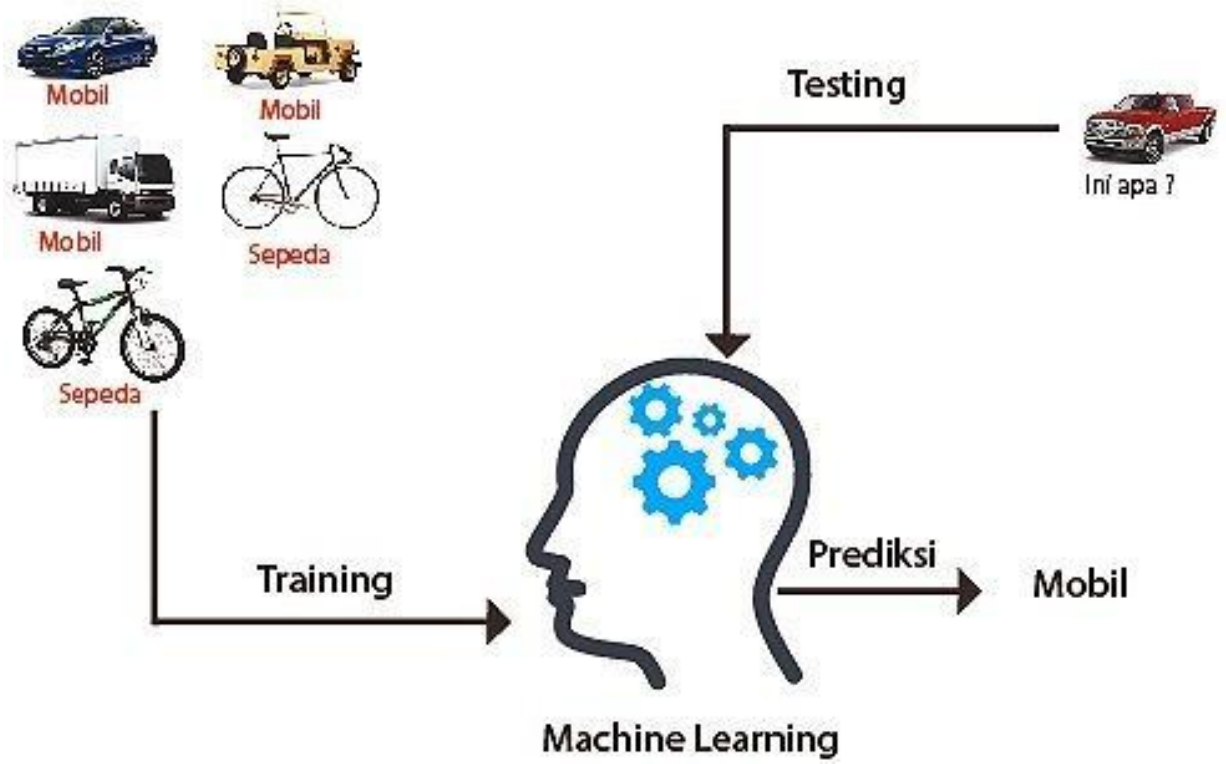
Excel, Tableau, SQL

BAHASA PEMROGRAMAN




Deep Learning
Supervised
Unsupervised
Content Extraction
Classification
Machine Translation
Question Answering
Text Generation
Image Recognition
Machine Vision
Speech to Text
Text to Speech
Machine Learning (ML)
Natural Language Processing (NLP)
Expert System
Vision
Speech
Planning
Robotics
Artificial Intelligence (AI)

How AI is impacting our lives?


Mobil
Mobil
Mobil
Sepeda
Sepeda
Testing
Ini apa ?
Training
Prediksi
Mobil
Machine Learning

CONTOH PROGRAM

Project I	: Smart Box Logistic
Project II	: Deteksi Gelombang Otak Manusia
Project III	: Pintu Otomatis Face Recognition
Internship I	: Recommendation System
Internship II	: Sentiment Analysis
Other Project	: Job Recommendation
	Smart Absensi
	Titanic Analysis
	Fraud Detection
	Dan lain-lain

DATA SCIENCE DALAM RUANG LINGKUP MAHASISWA

01 Pahami Skill Dasar Data Scientist

02 Siapkan Tools dan Mulai Pelajari Bahasa Pemrograman

03 Aplikasikan dan Bangun Portofolio

QnA