

## Introduction python & ai

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# Check In



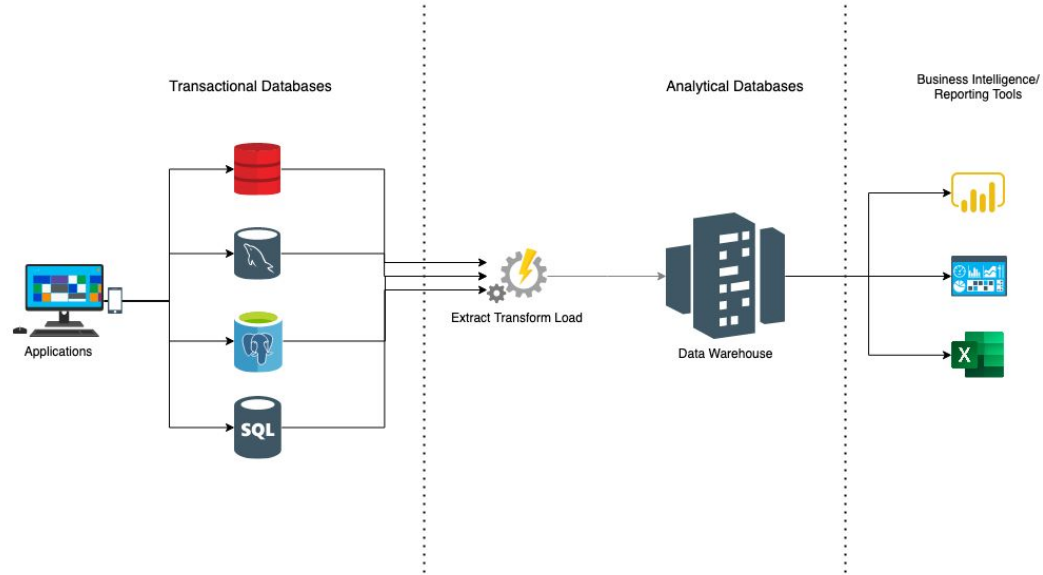
nama:

universitas:

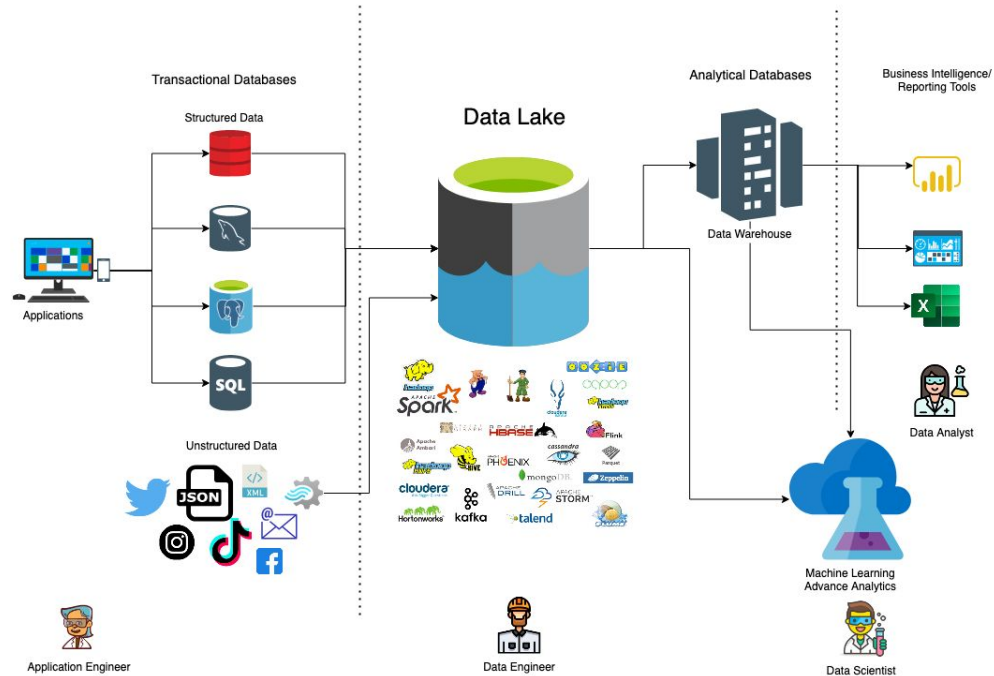
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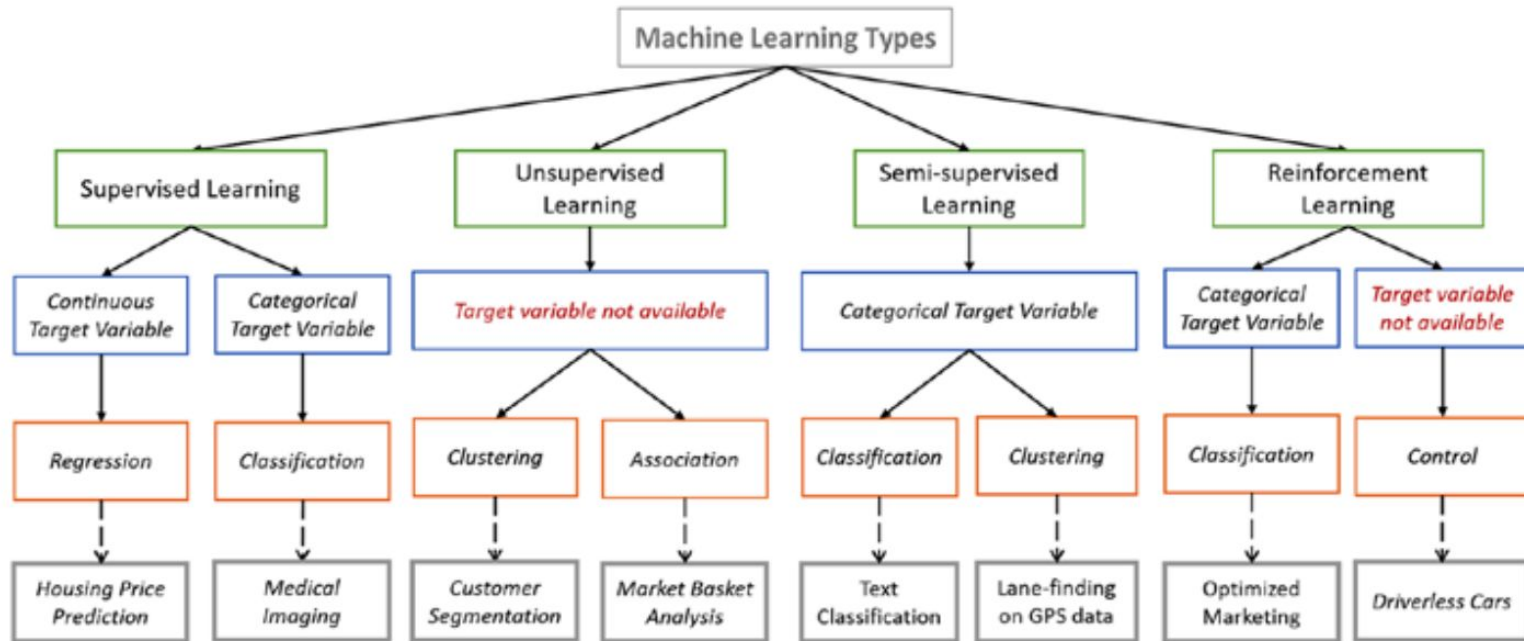
motivasi:

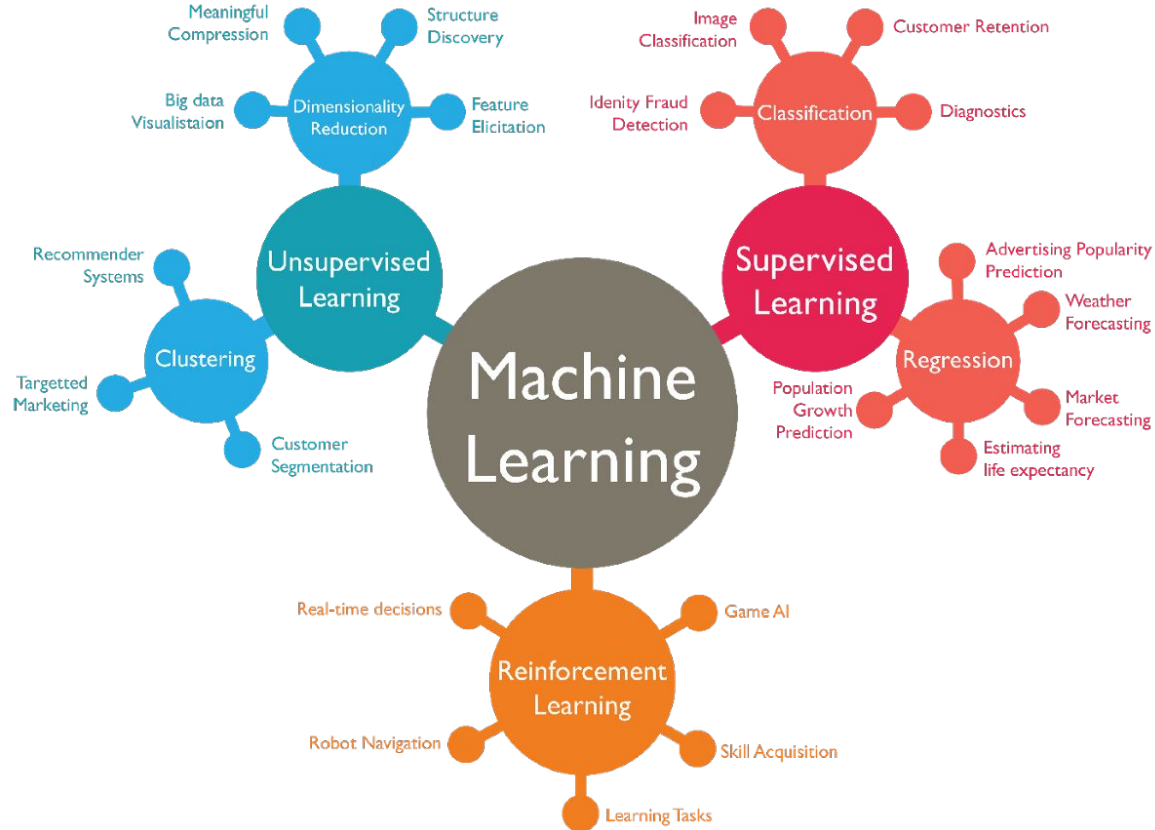
## Data Journey, in a Traditional data architecture:

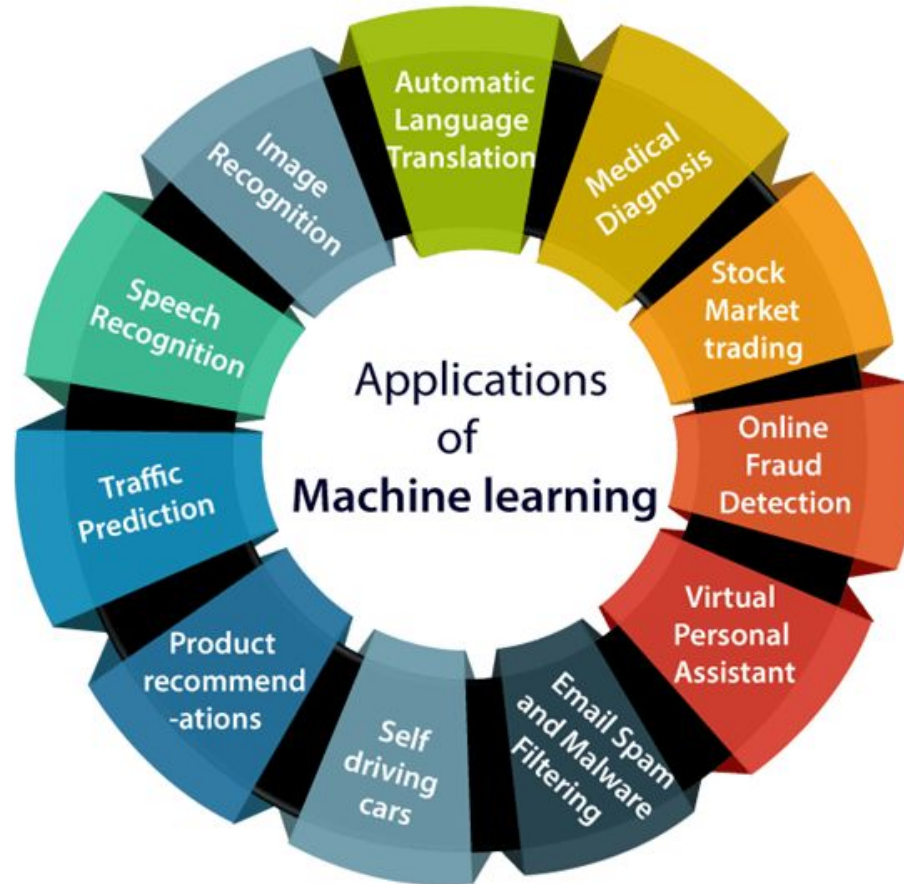


## Data Journey, in a Modern data architecture:









# What Python

The Python programming language is simple, easy to use, and incredibly powerful. This has seen the programming language grow tremendously in popularity, with many modern programming projects and tools choosing to adopt the language.

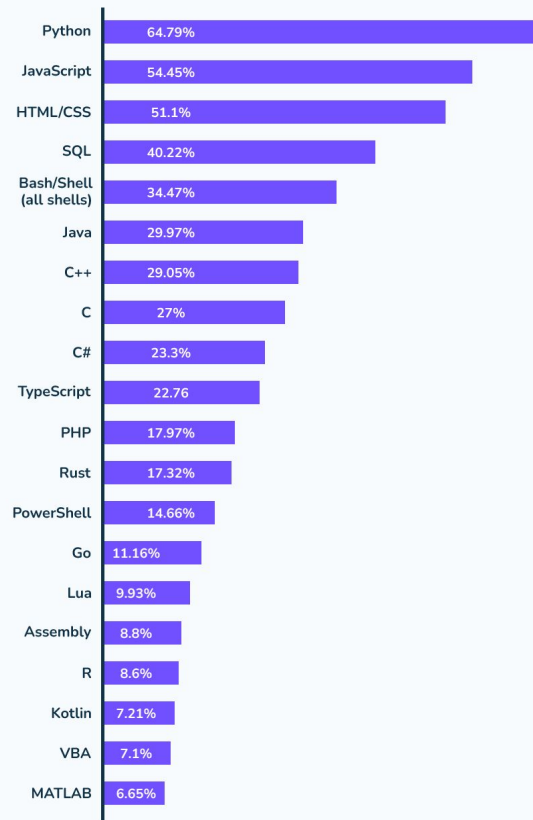


# why is python

- Free & Easy
- Dynamic (OOP, Functional)
- Multi OS (Windows, Linux, MacOS)
- Multi purpose (Web App, Desktop App, DevOps, Mobile App, Gaming, Data science, Robotics, Big Data Engineering etc)

Need more ? check this : [python survey](#)

Popularity of Programming Languages  
for Non-Developers



# Python for Cyber Security

third-party libraries that are perfect for automating security testing, such as [requests](#) for testing APIs or [Scapy](#) for web scraping. The language can also be integrated with popular penetration testing tools like [Nmap](#), [Metasploit](#), and [Burp Suite](#).



# Python for Cyber Security

**1.Ethical Hackers/Penetration Testers**

**2.Security Analysts**

**3.Cyber Security Researchers**

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## Security Analysts

Python has extensive data analysis libraries like [Pandas](#) and machine learning libraries like [PyTorch](#) that security analysts can use to discover anomalies. They can also use Python to interact with API, such as the Endpoint Detection and Response (EDR) tool CrowdStrike Falcon's [FalconPy](#) or [VirusTotal's vt-py library](#) for quicker response and investigation.



## Cyber Security Researchers

Python is a useful tool in the arsenal of a cyber security researcher. Third-party libraries like [pwntools](#) and [Atheris](#) allow them to automate the simulation of complex cyber attacks to find vulnerabilities. This process is known as [fuzzing](#) and is a popular method used to discover potential vulnerabilities.

## Things to do when learning Python

- **Build projects:** Building your own projects to fulfill your use case is the best way to learn about Python and what it can do. For instance, build a project to automate repetitive tasks at work (e.g., running multiple Linux commands, working with data in a spreadsheet, or finding out what the weather is like today).
- **Share what you are learning:** Write blog posts or social media updates about your learning and share this knowledge with others. Teaching someone else what you are learning helps you fully grasp complex concepts.
- **Read other people's code:** It is useful to see how others with more experience write, structure, and organize their code. You will gain insight into improving your Python projects.
- **Code every day:** Consistent practice is key to learning any new topic. Doing a little bit of coding daily will develop the muscle memory and neurological synapses needed to master Python.

# Hands on python basic

python basic





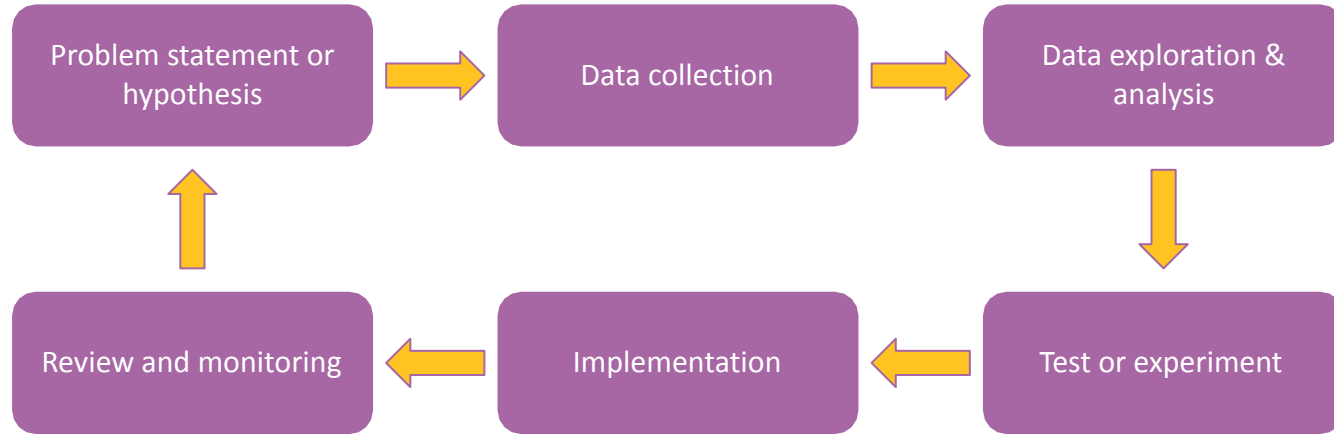
# Saatnya Quiz

Questions?

## Mistakes to avoid when learning Python

- **Trying to learn another language simultaneously:** Stick to learning one language at a time. Additional language features, components, and syntax will only confuse you and slow your learning.
- **Skipping the fundamentals:** Trying to jump into a complex project without having a solid understanding of programming fundamentals will hamper development and leave you frustrated.
- **Not practising what you are learning:** You need to practise what you are learning in tutorials and courses so that you can begin creating your own projects, custom scripts, and tools.
- **Not seeking help:** Trying to solve everything by yourself can be incredibly frustrating and take a long time. Find a study buddy, community, or mentor who can help you out when you get stuck.
-

# Continuous Improvement Loop



# BI & Analytics Tools

## Data Collection

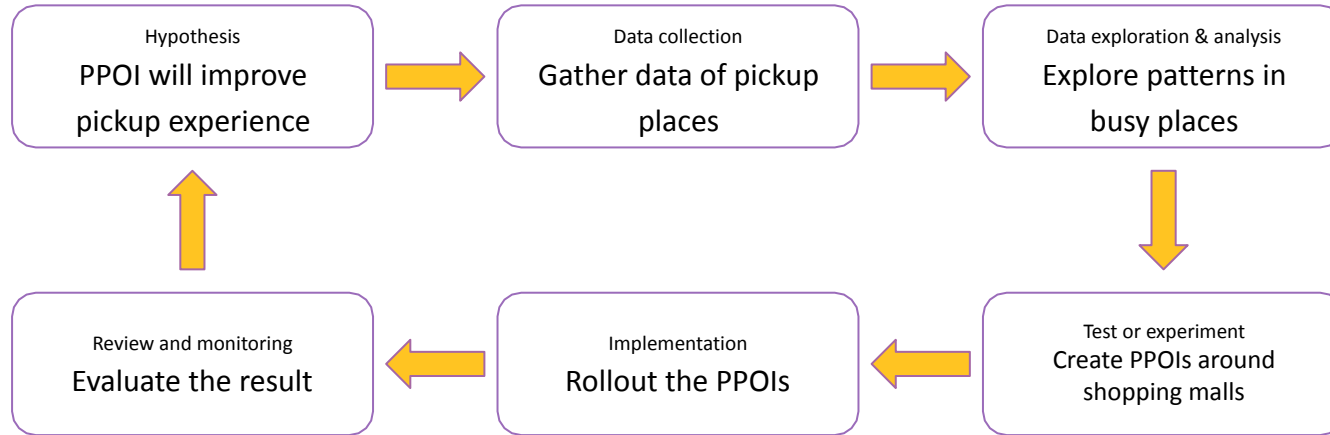


*and many  
more...*



## Use case: Pick-up points of interest (PPOI)

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# Online Classroom Rules



Make sure the  
**internet network** is  
**stable**



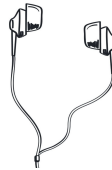
Always **turn on**  
the **webcam** during  
class



**Mute microphones**  
when facilitator explain,  
except Q&A



Click the **“raise hand”**  
button **when asking**



Using **earphones** are  
highly **recommended**



**Recording class** is  
**prohibited**