

# Model Deployment with Streamlit

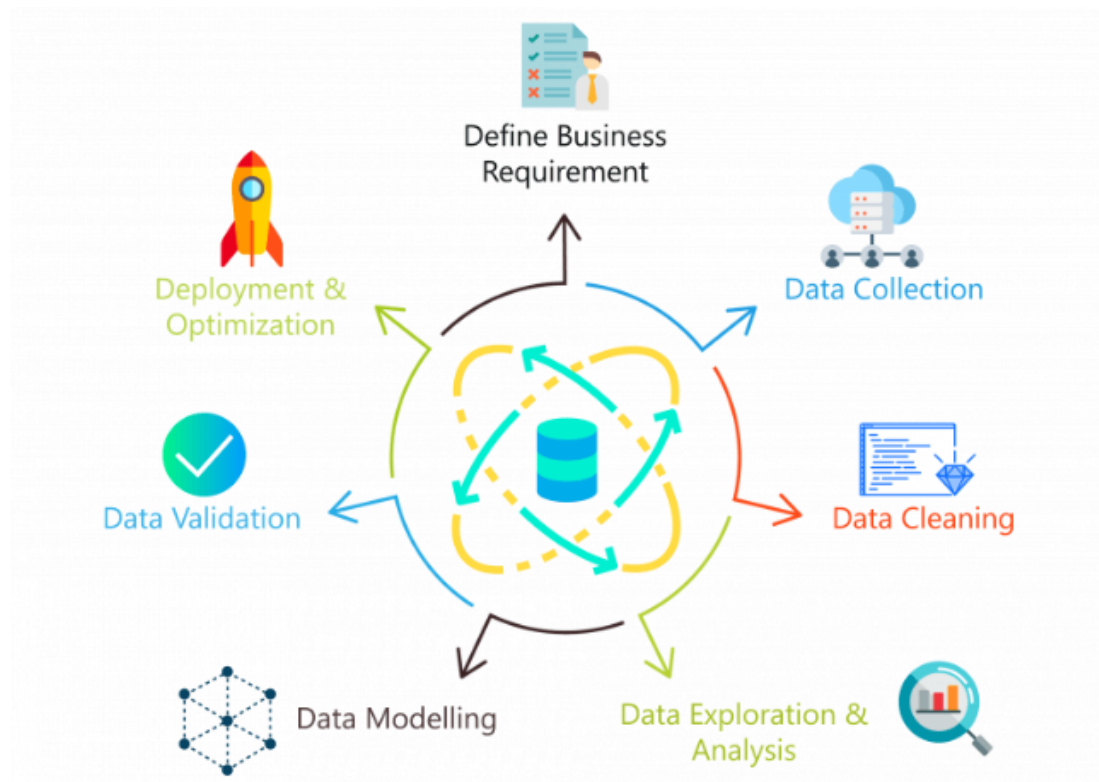
## Session-3



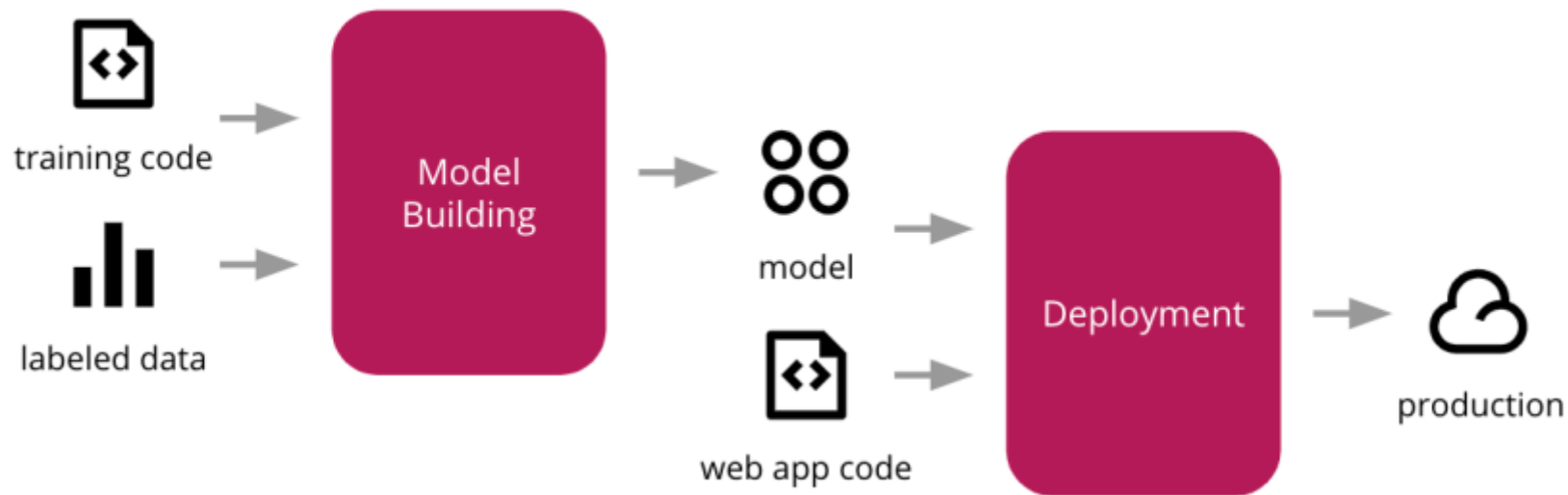
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# Model Deployment?



# Model Deployment?



# Environment?



3.7  
System Python



conda installation



3.8 (base)



3.7 (env\_1)



4.0.5 (env\_2)



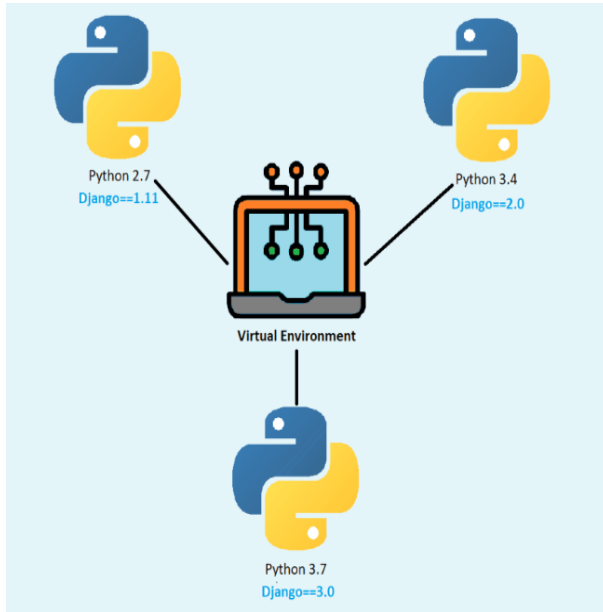
11 (env\_3)

# Environment?

A virtual environment is a **sil**o-ed Python installation apart from your main Python installation.



# Environment?



# Environment?

## CONDA Environment

### Conda

- Manage packages
- Manage env's

- `conda create -n env_name`
- `conda env list`
- `activate env_name`
- `conda install numpy`
- `deactivate`

## VIRTUAL (venv) Environment

### Venv

- Manage env's

### Pip

- Manage packages

- `python -m venv env_name`
- `source env_name/Scripts/activate`
- `pip install streamlit==1.10.0`
- `pip install -r requirements.txt`
- `deactivate`



# Streamlit?



**Streamlit** is an **open-source** Python library that makes it easy to **create** and **share** beautiful, custom **web apps** for machine learning and data science.

A screenshot of a Streamlit web application. The interface has a light blue sidebar on the left with two dropdown menus: "Choose the ML Model" set to "Decision Tree" and "Choose the Visualization" set to "Count of each Member Type". The main content area has a title "Prediction of Trip History Data using various Machine Learning Classification Algorithms- A Streamlit Demo!" and a checkbox "Show Raw Data" which is checked. Below this, it says "Showing raw data---->>>" followed by a table of trip data. The table has columns: "Duration", "Start date", "End date", "Start station number", and "End station number". The last row is highlighted in red. Below the table, it shows the "Accuracy of Decision Tree model is: 85.994809%8858131 %" in green text. Then it says "Report of Decision Tree model is:" followed by a table of metrics: "precision recall f1-score support". The table has two rows for classes 0 and 1, and a final row for "accuracy".

	Duration	Start date	End date	Start station number	End station number
0	1012	2010-09-20 11:27:04	2010-09-20 11:43:56	31200	31200
1	61	2010-09-20 11:41:22	2010-09-20 11:42:23	31209	31209
2	2690	2010-09-20 12:05:37	2010-09-20 12:50:27	31600	31600
3	1406	2010-09-20 12:06:05	2010-09-20 12:29:32	31600	31600
4	1813	2010-09-20 12:10:43	2010-09-20 12:14:17	31600	31600

Accuracy of Decision Tree model is:  
85.994809%8858131 %

Report of Decision Tree model is:

precision recall f1-score support

	precision	recall	f1-score	support
0	0.79	0.46	0.58	4874
1	0.87	0.97	0.92	18246
accuracy		0.86		23120