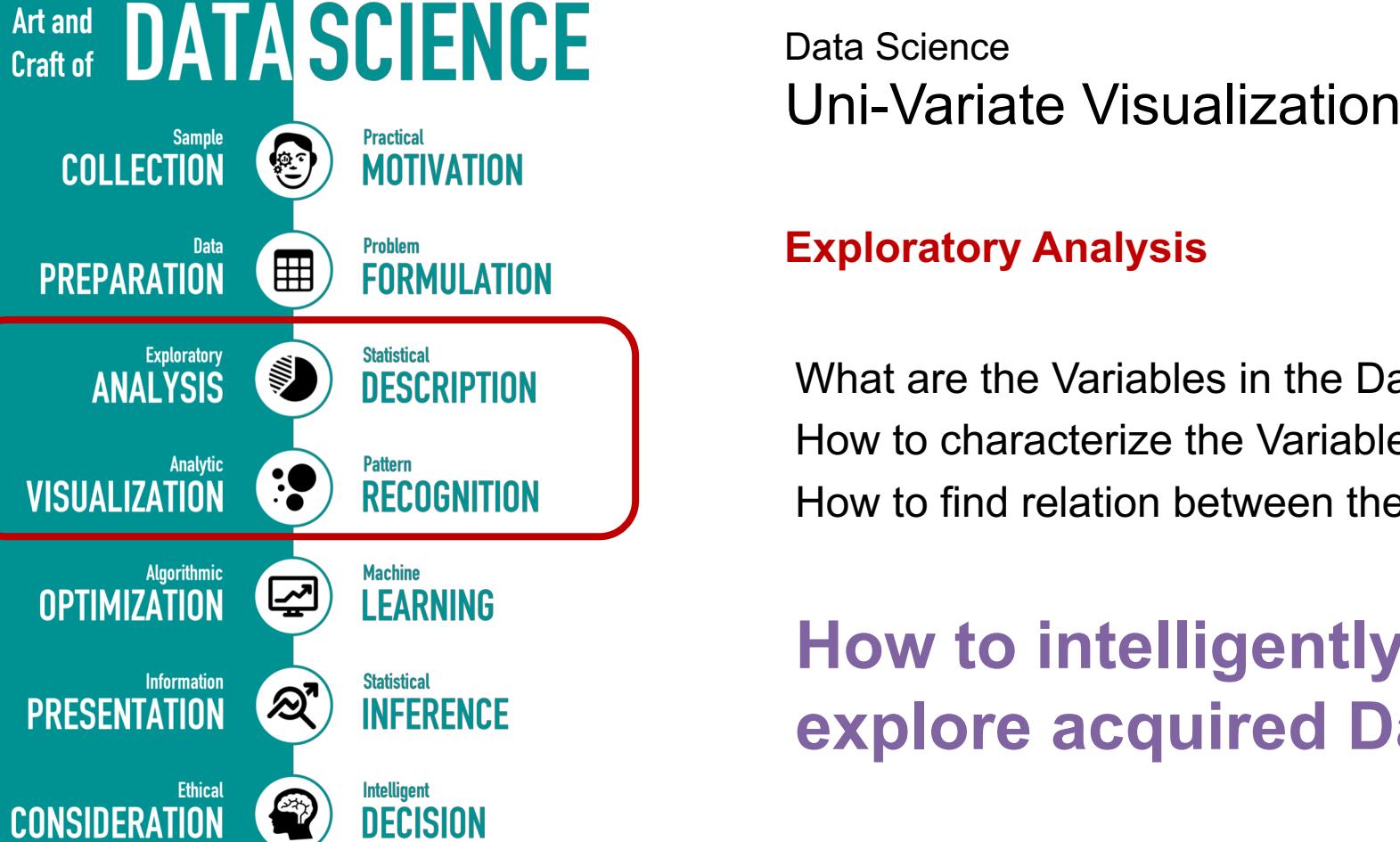


# Uni-Variate Visualization

**Sourav SEN GUPTA**  
Lecturer, SCSE, NTU







# Data Science

## The Pokemon Dataset

#	Name	Type 1	Type 2	Total	HP	Attack	Defense	Sp. Atk	Sp. Def	Speed	Generation	Legendary
430	Honchkrow	Dark	Flying	505	100	125	52	105	52	71	4	False
338	Solrock	Rock	Psychic	440	70	95	85	55	65	70	3	False
32	Nidoran♂	Poison	NaN	273	46	57	40	40	40	50	1	False
442	Spiritomb	Ghost	Dark	485	50	92	108	92	108	35	4	False
480	Uxie	Psychic	NaN	580	75	75	130	75	130	95	4	True
536	Palpitoad	Water	Ground	384	75	65	55	65	55	69	5	False
360	Wynaut	Psychic	NaN	260	95	23	48	23	48	23	3	False
478	Froslass	Ice	Ghost	480	70	80	70	80	70	110	4	False
76	Golem	Rock	Ground	495	80	120	130	55	65	45	1	False
177	Natu	Psychic	Flying	320	40	50	45	70	45	70	2	False

Source : Kaggle Datasets | [Pokemon with stats](#) by Alberto Barradas | <https://www.kaggle.com/abcsds/pokemon>

45, 60, 80, 80, 39, 58, 78, 78, 78, 44, 59, 79, 79,
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# Data Science

## Uni-Variate Statistics

### Statistical Summary of the Data

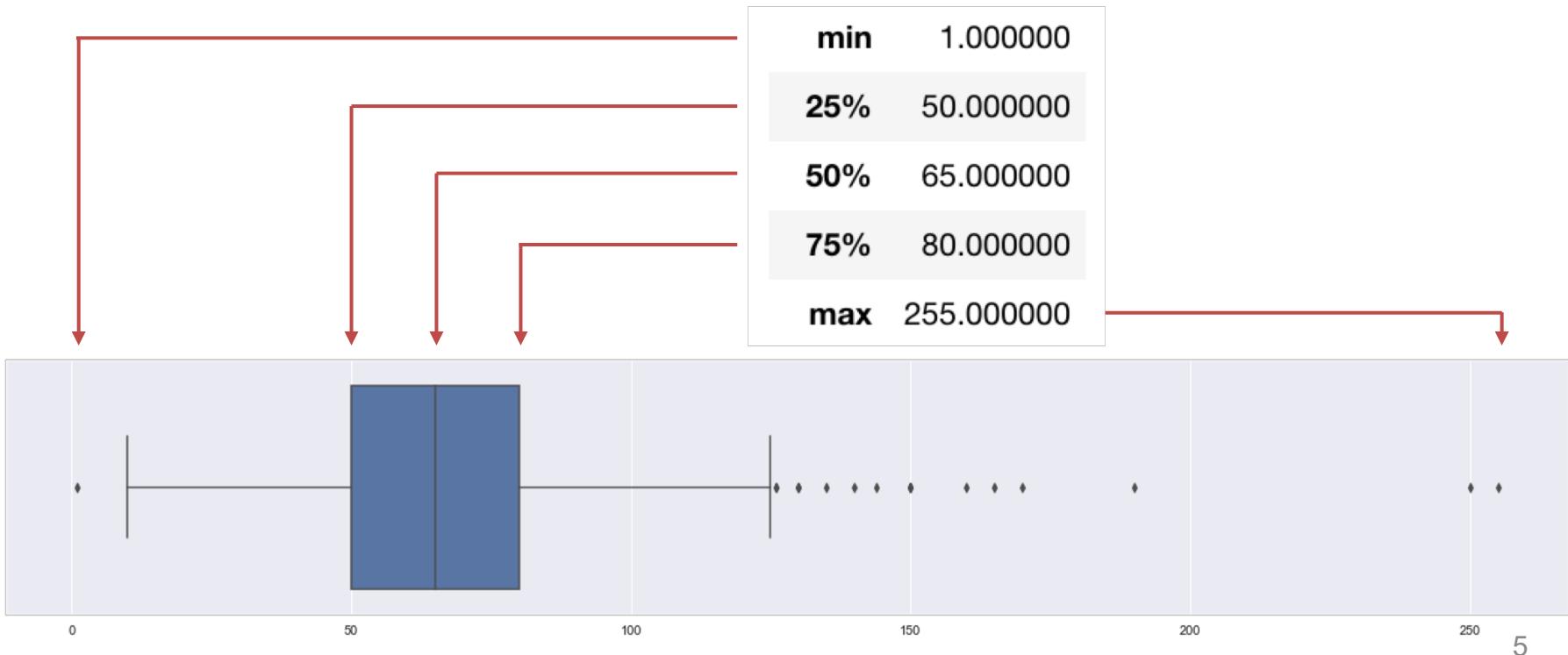
**HP** The Average Hit Point  
 Deviation from Average  
 Median and Quantiles

### Statistical Questions

- What is the Central Tendency?
- What is the Spread of the Data?

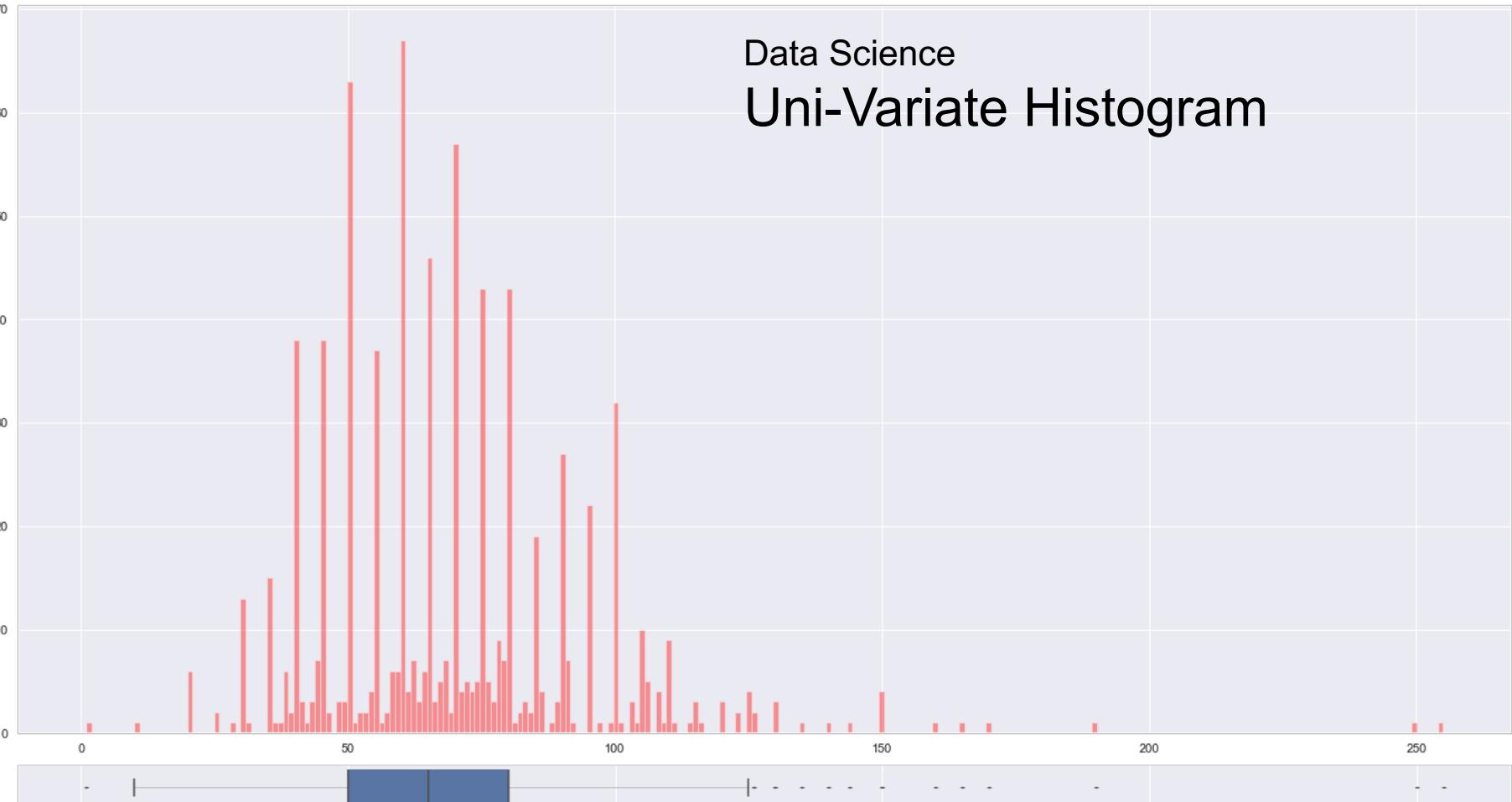
# Data Science

## Uni-Variate Box-Plot



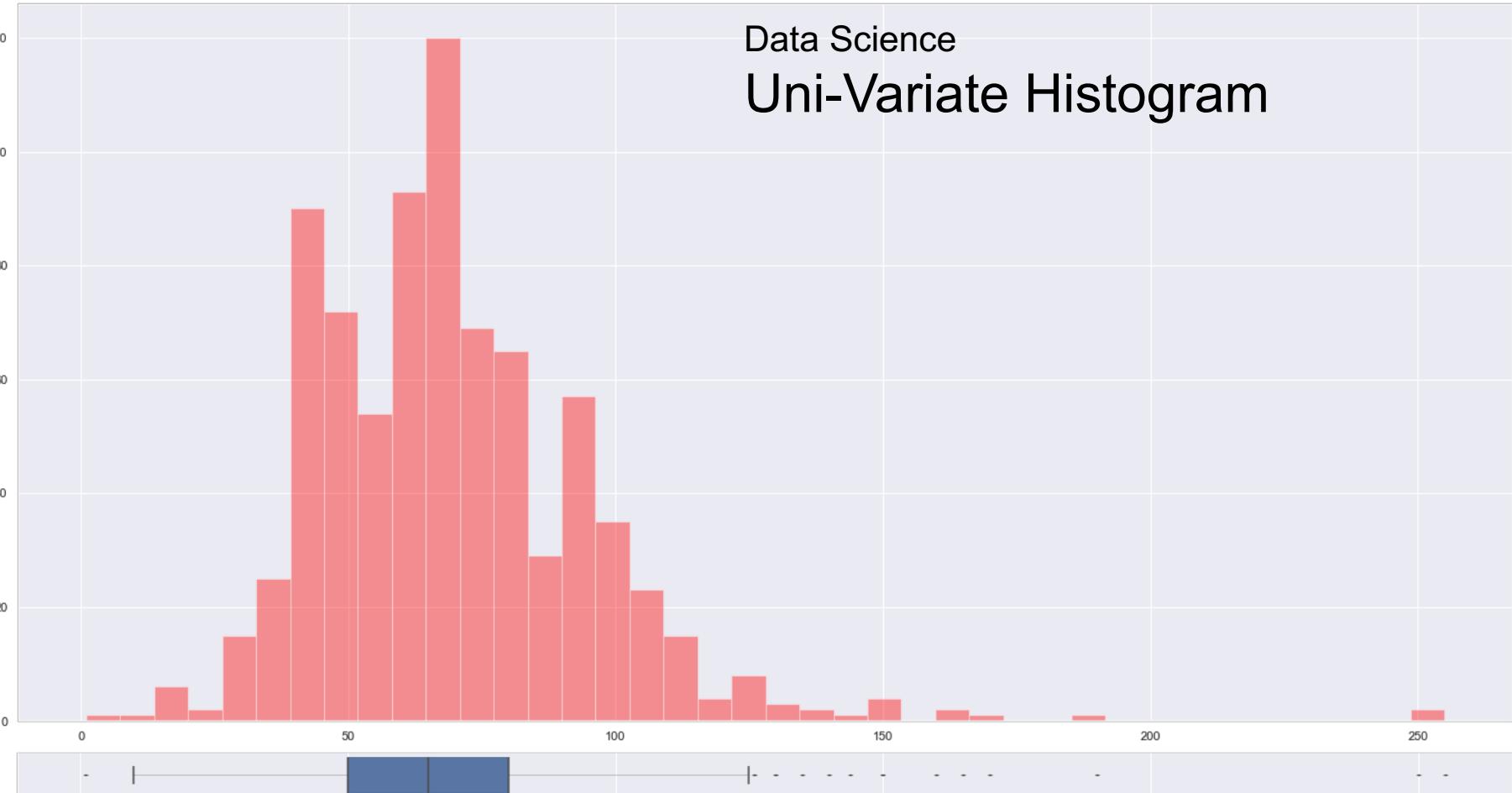
# Data Science

## Uni-Variate Histogram



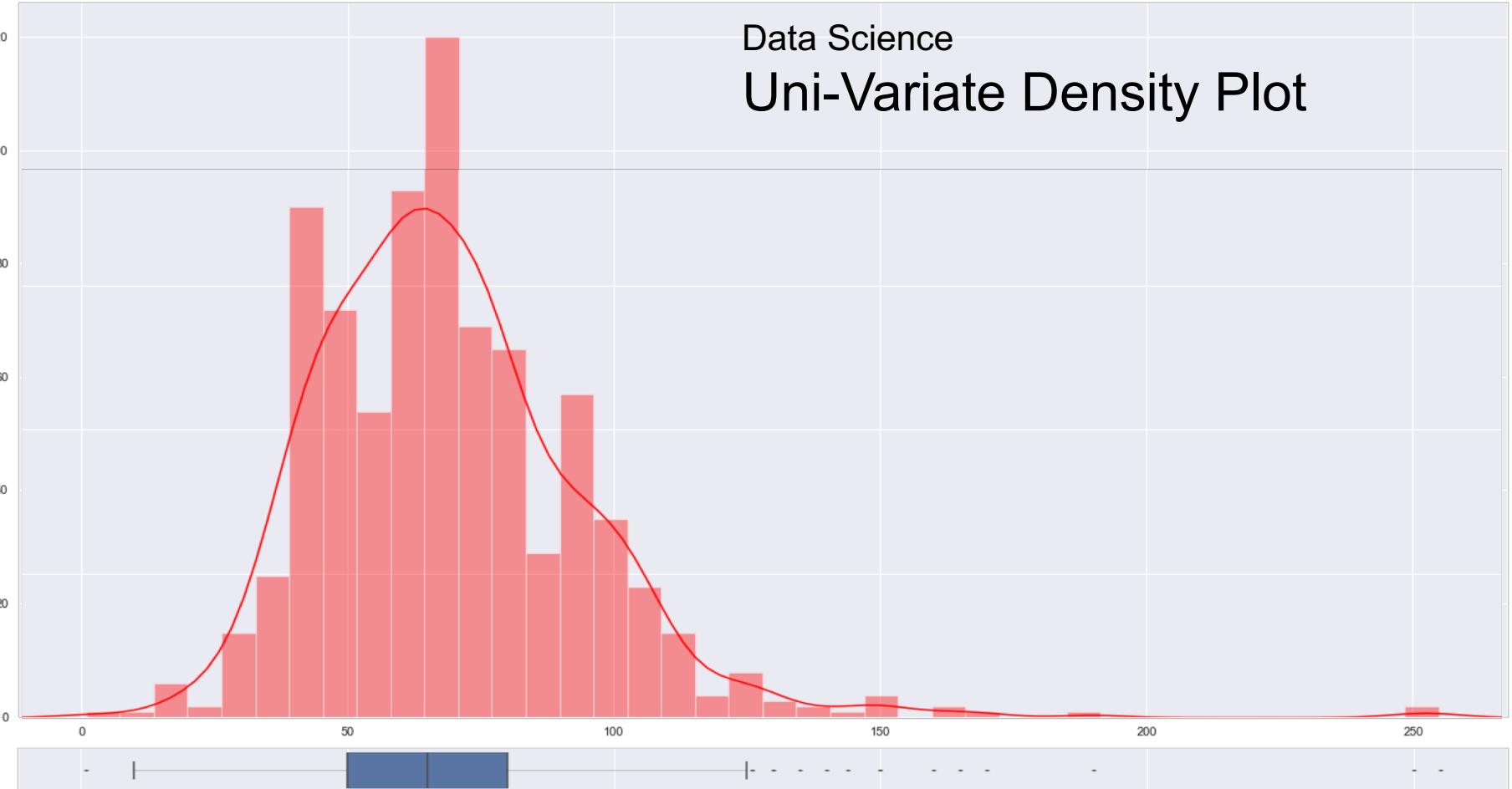
# Data Science

## Uni-Variate Histogram



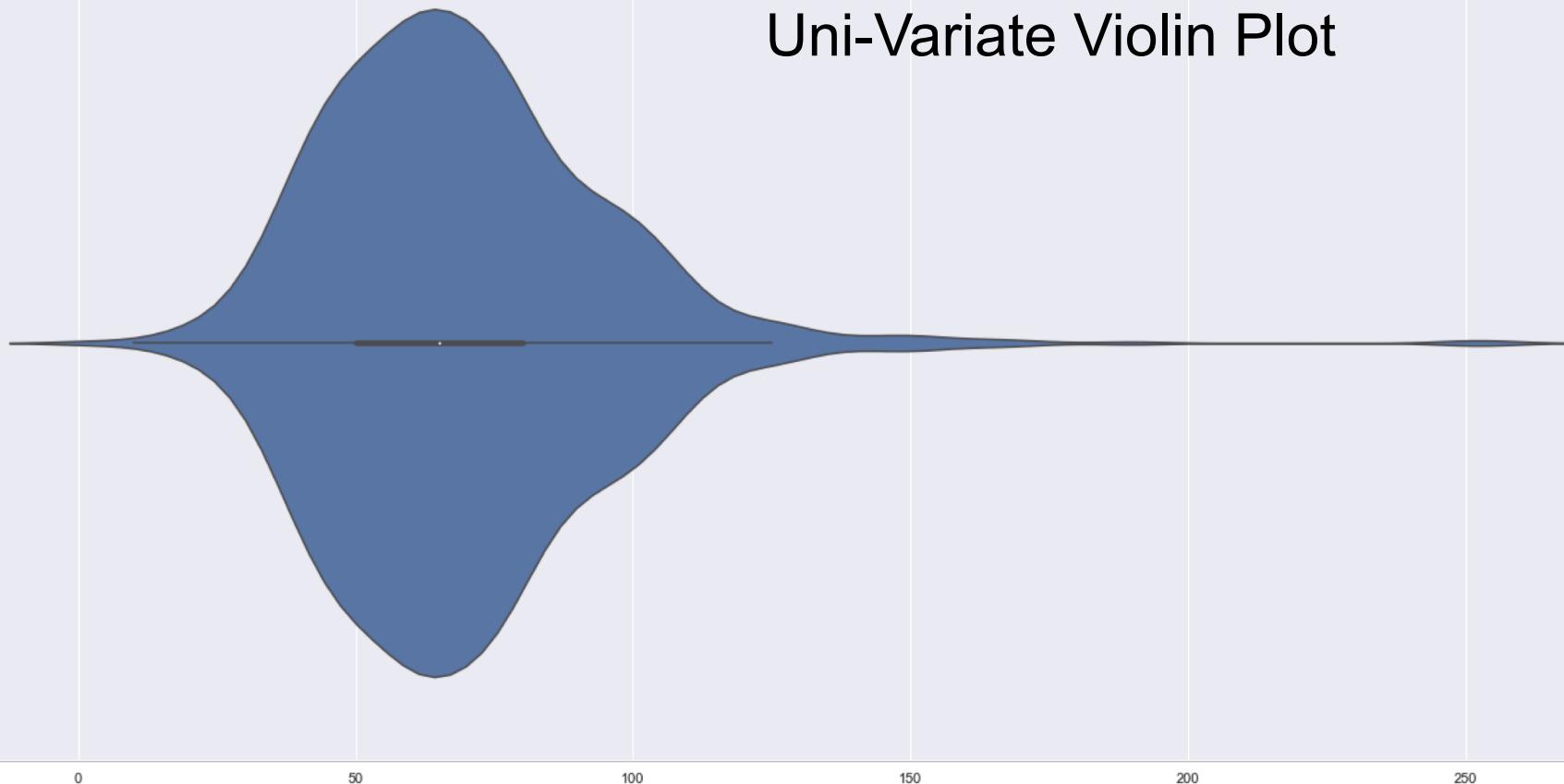
# Data Science

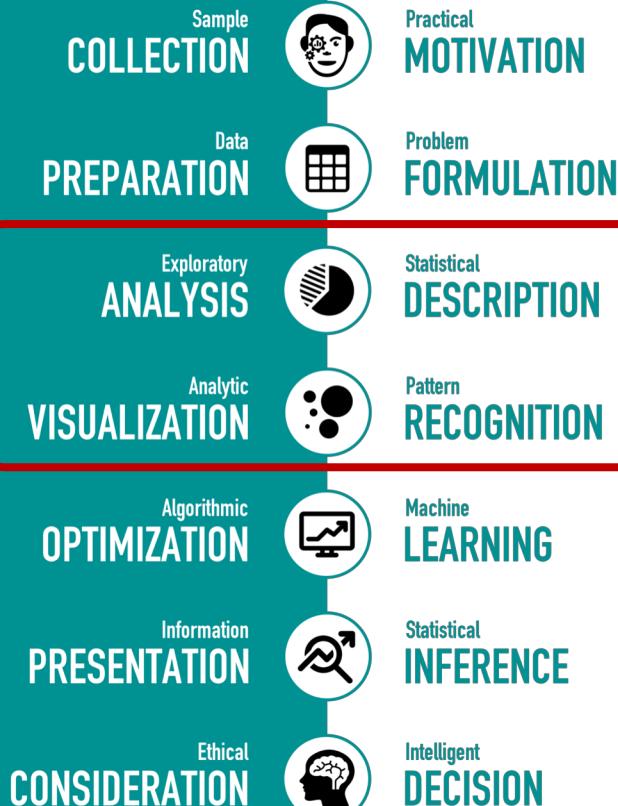
## Uni-Variate Density Plot



# Data Science

## Uni-Variate Violin Plot





## Data Science Pipeline **Exploratory Analysis**

- How to summarize the acquired Data?
- How to visualize the acquired Data?
- How to analyze the acquired Data?

**How to intelligently  
explore acquired Data?**