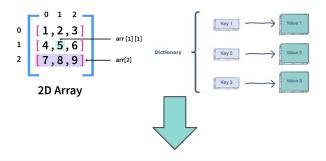
Python Basics

for Data Analytics and Visualization

Haris Gulzar

Al Researcher

Lecture 2: Moving towards real data



Α	В	С	D	E	F	G
Donation ID	Donor ID	Туре	Method	Status	Amount	Date
D153	S067	Donation	Credit card	Completed	\$100,00	02.05
D154	S123	Shirt	Credit card	Abandoned	\$25,00	03.05
D155	S345	Shirt	Paypal	Completed	\$25,00	07.05
D156	S367	Donation	Cash	Completed	\$50,00	07.05
D157	S121	Shirt	Paypal	Failed	\$25,00	07.05
D158	S112	Donation	Credit card	Completed	\$75,00	10.05
D159	S055	Donation	Credit card	Completed	\$100,00	12.05
D160	S089	Donation	Paypal	Completed	\$60,00	13.05
D161	S523	Shirt	Credit card	Failed	\$25,00	15.05
D162	S123	Shirt	Cash	Completed	\$25,00	17.05
D163	S165	Donation	Paypal	Abandoned	\$35,00	17.05
D164	S094	Donation	Paypal	Completed	\$75,00	21.05
D165	S054	Donation	Credit card	Completed	\$50,00	22.05
D166	S031	Shirt	Credit card	Completed	\$25,00	24.05
D167	S451	Donation	Cash	Completed	\$100,00	24.05
D168	S112	Shirt	Credit card	Abandoned	\$25,00	27.05
D169	S002	Donation	Paypal	Failed	\$50,00	27.05
D170	S112	Shirt	Credit card	Completed	\$25,00	30.05
Total May					\$895,00	
	Donation ID D153 D154 D155 D156 D157 D158 D159 D160 D161 D162 D163 D164 D165 D166 D167 D168 D169 D170	Donation ID Donor ID D153 S067 D154 S123 D155 S345 D156 S367 D157 S121 D158 S112 D159 S055 D160 S089 D161 S523 D162 S123 D163 S165 D164 S094 D165 S054 D166 S031 D167 S451 D168 S112 D169 S002 D170 S112	Donation ID Donor ID Type D153 \$067 Donation D154 \$123 Shirt D155 \$345 Shirt D156 \$367 Donation D157 \$121 Shirt D158 \$112 Donation D159 \$055 Donation D160 \$089 Donation D161 \$523 Shirt D162 \$123 Shirt D163 \$165 Donation D164 \$094 Donation D165 \$054 Donation D166 \$031 Shirt D167 \$451 Donation D168 \$112 Shirt D169 \$002 Donation D170 \$112 Shirt	Donation ID Donor ID Type Method D153 S067 Donation Credit card D154 S123 Shirt Credit card D155 S345 Shirt Paypal D156 S367 Donation Cash D157 S121 Shirt Paypal D158 S112 Donation Credit card D159 S055 Donation Credit card D160 S089 Donation Paypal D161 S523 Shirt Credit card D162 S123 Shirt Cash D163 S165 Donation Paypal D164 S094 Donation Paypal D165 S054 Donation Credit card D166 S031 Shirt Credit card D167 S451 Donation Cash D168 S112 Shirt Credit card D169 S002 Donation Paypal	Donation ID Donor ID Type Method Status D153 S067 Donation Credit card Completed D154 S123 Shirt Credit card Abandoned D155 S345 Shirt Paypal Completed D156 S367 Donation Cash Completed D157 S121 Shirt Paypal Failed D158 S112 Donation Credit card Completed D159 S055 Donation Credit card Completed D160 S089 Donation Paypal Completed D161 S523 Shirt Credit card Failed D162 S123 Shirt Cash Completed D163 S165 Donation Paypal Abandoned D164 S094 Donation Paypal Completed D165 S054 Donation Credit card Completed D166 S031 Shirt	Donation ID Donor ID Type Method Status Amount D153 S067 Donation Credit card Completed \$100,00 D154 S123 Shirt Credit card Abandoned \$25,00 D155 S345 Shirt Paypal Completed \$25,00 D156 S367 Donation Cash Completed \$50,00 D157 S121 Shirt Paypal Failed \$25,00 D158 S112 Donation Credit card Completed \$75,00 D159 S055 Donation Credit card Completed \$100,00 D160 S089 Donation Paypal Completed \$60,00 D161 S523 Shirt Credit card Failed \$25,00 D162 S123 Shirt Cash Completed \$25,00 D163 S165 Donation Paypal Abandoned \$35,00 D164 S094 Donat

Libraries



Summary of Lecture 2

Numpy (For Numerical Operations in Python)

Pandas (For Structured Data)

Read Data From Excel spreadsheets and text files.

	A	В	C	D	E	F	G
1	Donation ID	Donor ID	Type	Method	Status	Amount	Date
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3	D154	S123	Shirt	Credit card	Abandoned	\$25,00	03.05
4	D155	S345	Shirt	Paypal	Completed	\$25,00	07.05
5	D156	S367	Donation	Cash	Completed	\$50,00	07.05
6	D157	S121	Shirt	Paypal	Failed	\$25,00	07.05
7	D158	S112	Donation	Credit card	Completed	\$75,00	10.05
8	D159	S055	Donation	Credit card	Completed	\$100,00	12.05
9	D160	5089	Donation	Paypal	Completed	\$60,00	13.05
LO	D161	S523	Shirt	Credit card	Failed	\$25,00	15.05
11	D162	S123	Shirt	Cash	Completed	\$25,00	17.05
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17	D168	S112	Shirt	Credit card	Abandoned	\$25,00	27.05
18	D169	S002	Donation	Paypal	Failed	\$50,00	27.05
19	D170	S112	Shirt	Credit card	Completed	\$25,00	30.05
20	Total May					\$895.00	



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Everything for Data Analytics is possible!

Imagine Hard and Search the Solution!

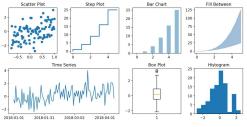
Everything for Data Analytics is possible!

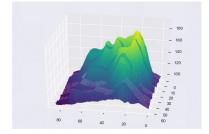
<u>Imagine Hard</u> and Search the Solution!

3. Data Visualization and Clustering

Data Visualization in Python

The best practice is to visualize the data at hand, before thinking about what we want to do with it. We will study different types of the data visualizations by plotting.





Data Clustering

We will study the basic clustering techniques in Python like

- 1. K-means clustering
- 2. Hierarchical Clustering

