

Esempio Modulo Visualizzazione

May 4, 2022

1 Esempi di Utilizzo del MODULO VISUALIZZAZIONE della libreria IntelligenzaArtificiale

1.1 Installare la libreria

```
[ ]: #Per installare la libreria sul tuo computer puoi usare il comando :  
pip3 install intelligenzaartificiale  
  
#se invece utilizzi google colab puoi usare:  
!pip install intelligenzaartificiale
```

1.2 Importare la libreria

```
[2]: from intelligenzaartificiale import dataset as dt  
from intelligenzaartificiale import visualizzazione as vz  
%matplotlib inline
```

```
[3]: dt.lista_datasets()
```

```
[3]:
```

	dataset_id	title
0	AirPassengers	Monthly Airline Passenger Numbers 1949-1960
1	BJsales	Sales Data with Leading Indicator
2	BOD	Biochemical Oxygen Demand
3	Formaldehyde	Determination of Formaldehyde
4	HairEyeColor	Hair and Eye Color of Statistics Students
..
752	VerbAgg	Verbal Aggression item responses
753	cake	Breakage Angle of Chocolate Cakes
754	cbpp	Contagious bovine pleuropneumonia
755	grouseticks	Data on red grouse ticks from Elston et al. 2001
756	sleepstudy	Reaction times in a sleep deprivation study

[757 rows x 2 columns]

```
[4]: il_mio_dataset= dt.importa_dataset("cancer")  
  
print(il_mio_dataset)
```

	inst	time	status	age	sex	ph.ecog	ph.karno	pat.karno	meal.cal	\
1	3.0	306	2	74	1	1.0	90.0	100.0	1175.0	
2	3.0	455	2	68	1	0.0	90.0	90.0	1225.0	
3	3.0	1010	1	56	1	0.0	90.0	90.0	NaN	
4	5.0	210	2	57	1	1.0	90.0	60.0	1150.0	
5	1.0	883	2	60	1	0.0	100.0	90.0	NaN	
..	
224	1.0	188	1	77	1	1.0	80.0	60.0	NaN	
225	13.0	191	1	39	1	0.0	90.0	90.0	2350.0	
226	32.0	105	1	75	2	2.0	60.0	70.0	1025.0	
227	6.0	174	1	66	1	1.0	90.0	100.0	1075.0	
228	22.0	177	1	58	2	1.0	80.0	90.0	1060.0	

	wt.loss
1	NaN
2	15.0
3	15.0
4	11.0
5	0.0
..	...
224	3.0
225	-5.0
226	5.0
227	1.0
228	0.0

[228 rows x 10 columns]

1.3 Grafici di Base

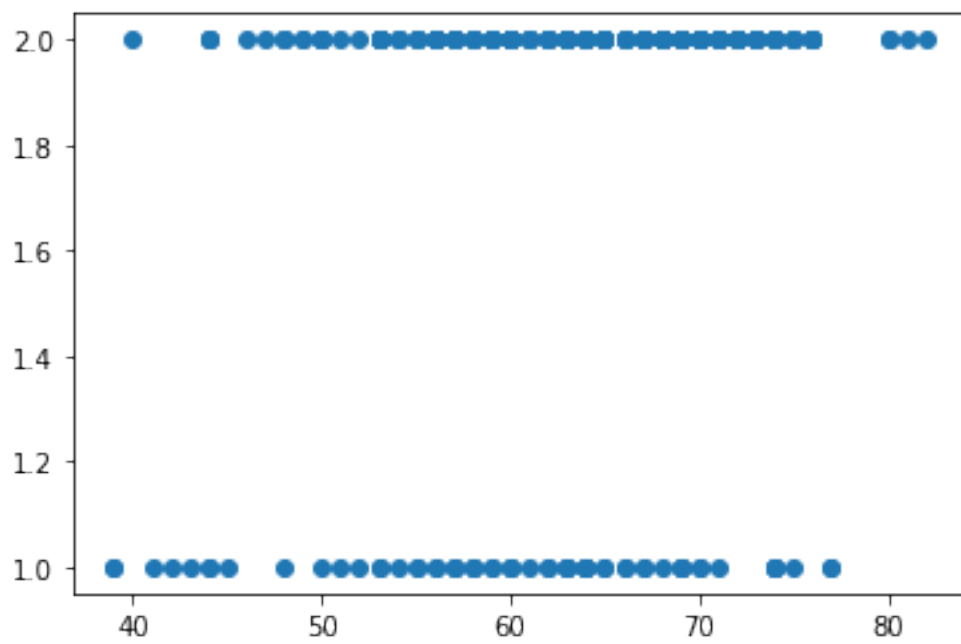
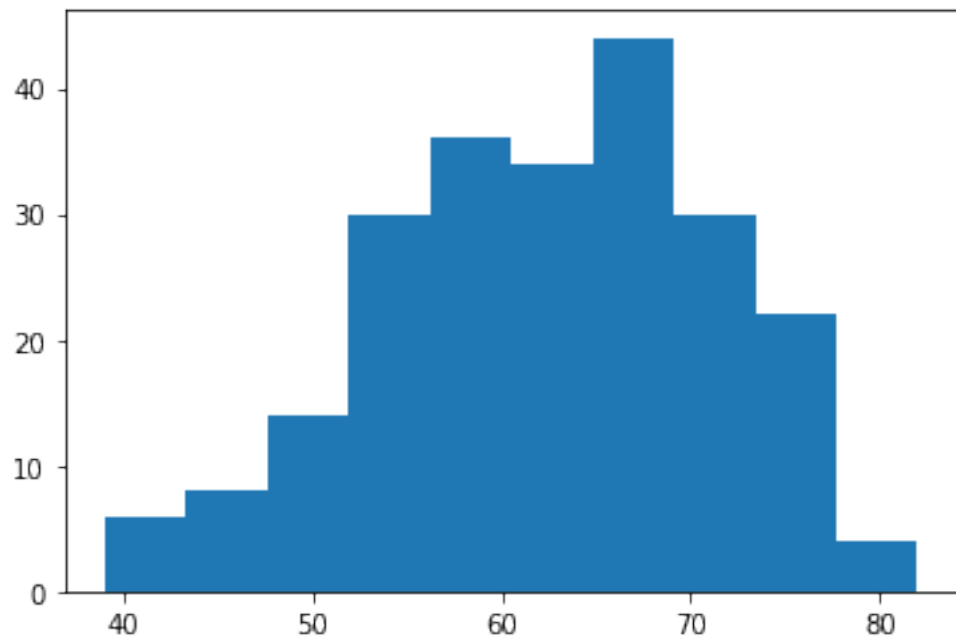
```
[8]: # grafico singola colonna
      vz.grafico_colonna(il_mio_dataset,"age")

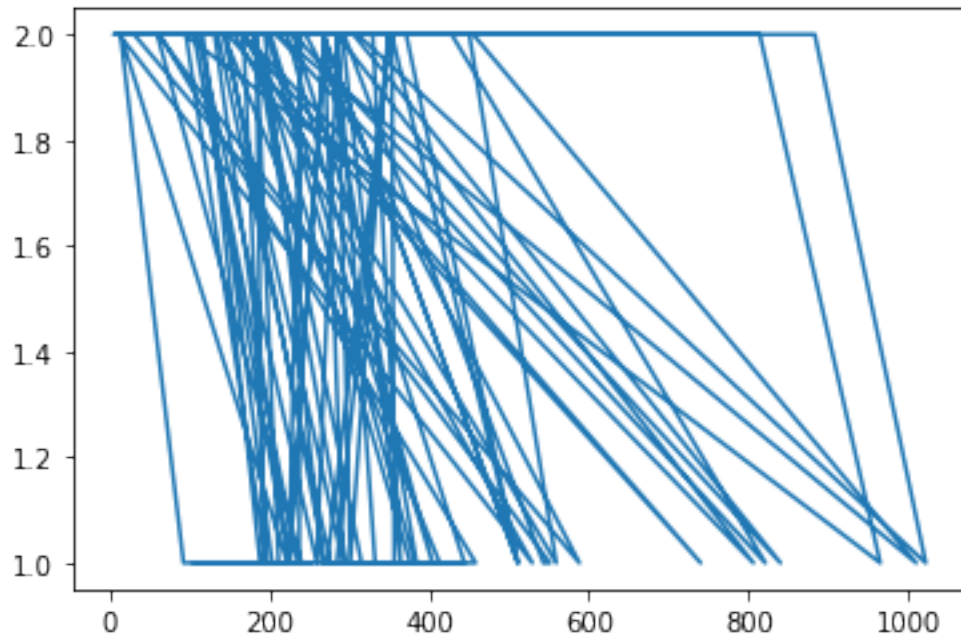
      # grafico a punti di due colonne
      vz.grafico_scatter(il_mio_dataset,"age","status")

      # grafico a linee di due colonne
      vz.grafico_line(il_mio_dataset,"time","status")

      # grafico boxplot di due colonne
      vz.grafico_boxplot(il_mio_dataset,"pat.karno","age")

      # histogramma di due colonne
      vz.grafico_hist(il_mio_dataset,"pat.karno","ph.karno")
```

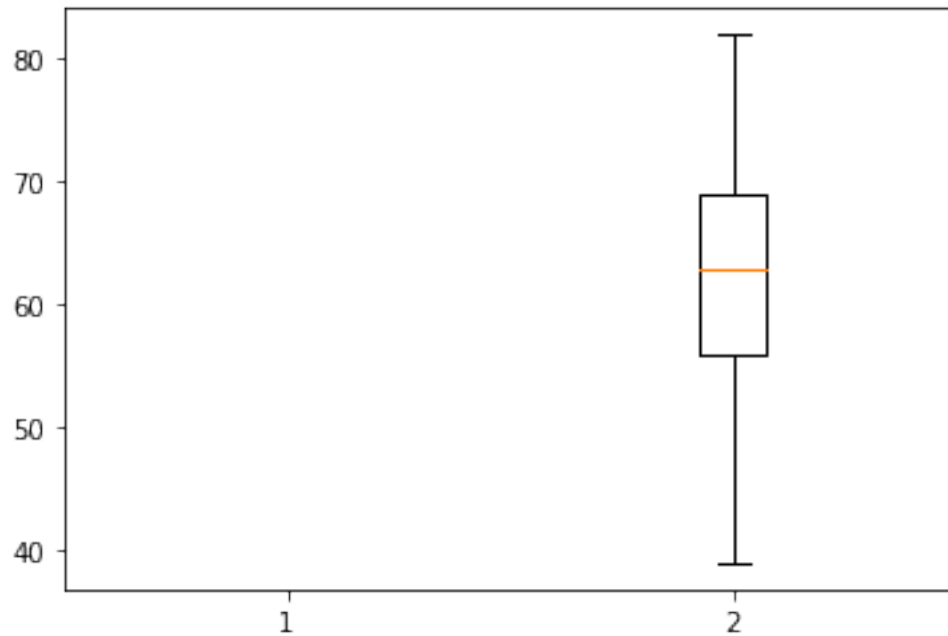




```

/home/alino/.local/lib/python3.8/site-
packages/matplotlib/cbook/__init__.py:1220: RuntimeWarning: invalid value
encountered in less_equal
    wiskhi = x[x <= hival]
/home/alino/.local/lib/python3.8/site-
packages/matplotlib/cbook/__init__.py:1227: RuntimeWarning: invalid value
encountered in greater_equal
    wisklo = x[x >= loval]
/home/alino/.local/lib/python3.8/site-
packages/matplotlib/cbook/__init__.py:1235: RuntimeWarning: invalid value
encountered in less
    x[x < stats['whislo']],
/home/alino/.local/lib/python3.8/site-
packages/matplotlib/cbook/__init__.py:1236: RuntimeWarning: invalid value
encountered in greater
    x[x > stats['whishi']],

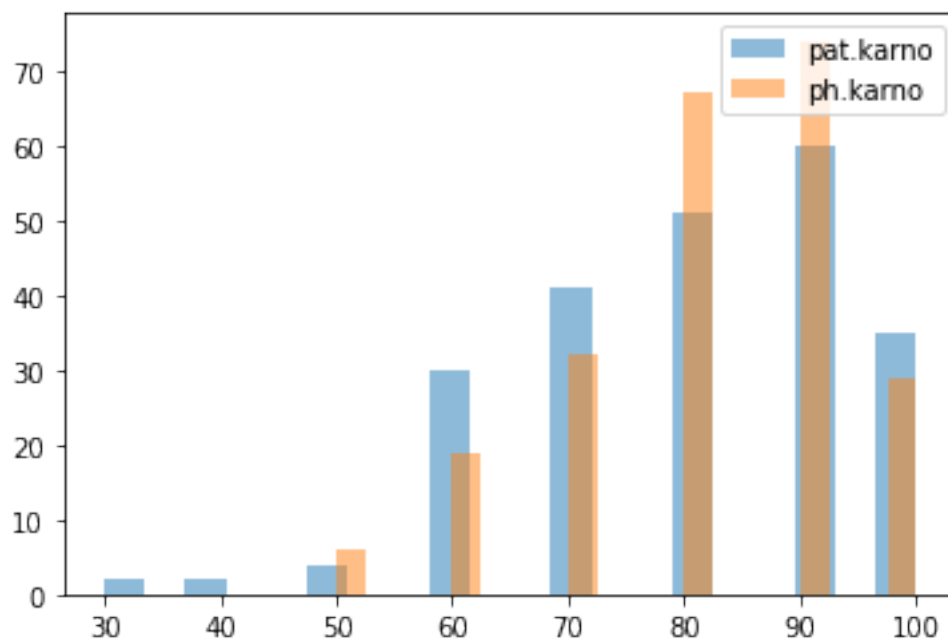
```



```

/home/alino/.local/lib/python3.8/site-packages/numpy/lib/histograms.py:839:
RuntimeWarning: invalid value encountered in greater_equal
    keep = (tmp_a >= first_edge)
/home/alino/.local/lib/python3.8/site-packages/numpy/lib/histograms.py:840:
RuntimeWarning: invalid value encountered in less_equal
    keep &= (tmp_a <= last_edge)

```



```
[8]: <module 'matplotlib.pyplot' from '/home/alino/.local/lib/python3.8/site-packages/matplotlib/pyplot.py'>
```

1.4 Automatizzare la creazione dei grafici

```
[6]: # creare grafici in modo automatico
from intelligenzaartificiale import statistica as st
st.report_dataset(il_mio_dataset)

#apri il tuo dataset sul web
st.apri_dataframe_nel_browser(il_mio_dataset)
```

Summarize dataset: 0%| | 0/5 [00:00<?, ?it/s]

Generate report structure: 0%| | 0/1 [00:00<?, ?it/s]

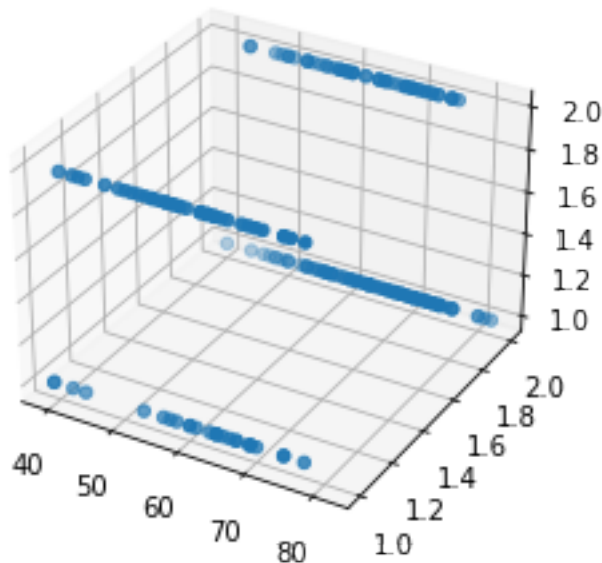
Render HTML: 0%| | 0/1 [00:00<?, ?it/s]

Export report to file: 0%| | 0/1 [00:00<?, ?it/s]

Report salvato in questa directory profile_report_pandas.html

1.5 Grafici 3D

```
[9]: # creare grafici tridimensionali
vz.grafico_3d(il_mio_dataset, "age", "status", "sex")
```



```
[9]: <module 'matplotlib.pyplot' from '/home/alino/.local/lib/python3.8/site-packages/matplotlib/pyplot.py'>
```

1.6 Altre risorse

- [Documentazione Ufficiale](#)
- [Blog Ufficiale](#)
- [Corsi Gratis](#)
- [Ebook Gratis](#)
- [Progetti Python Open Source](#)
- [Dataset Pubblici](#)
- [Editor Python Online per il M.L.](#)

2 Per favore citaci se usi la Libreria.