

main_py

August 23, 2021

1 Pie chart of samples

```
[1]: import pandas as pd
import matplotlib.pyplot as plt
```

```
[2]: %matplotlib inline
```

```
[3]: df = pd.read_csv("../input/phenotypes/merged/_m/merged_phenotypes.csv",
    ↪index_col=0)
df = df[df["Race"].isin(["AA", "CAUC"]) & (df["Dx"].isin(["Control",
    ↪"Schizo"]))].copy()
df.Race = df.Race.astype("category").cat.rename_categories({'CAUC': 'EA'})
df.head()
```

```
[3]:
```

	BrNum	RNum	Region	RIN	Age	Sex	Race	Dx	mitoRate	\
R12864	Br1303	R12864	Caudate	9.6	42.98	F	AA	Schizo	0.032654	
R12865	Br1320	R12865	Caudate	9.5	53.12	M	AA	Schizo	0.019787	
R12866	Br1321	R12866	Caudate	9.1	57.13	F	AA	Schizo	0.013006	
R12867	Br1326	R12867	Caudate	9.2	74.56	M	AA	Schizo	0.032594	
R12868	Br1418	R12868	Caudate	9.5	43.35	M	AA	Schizo	0.052347	

	rRNA_rate	overallMapRate
R12864	0.000087	0.909350
R12865	0.000070	0.873484
R12866	0.000040	0.905505
R12867	0.000038	0.910551
R12868	0.000056	0.748659

```
[4]: df.groupby("Region").size()
```

```
[4]: Region
Caudate      420
DLPFC        434
DentateGyrus 161
HIPPO        447
dtype: int64
```

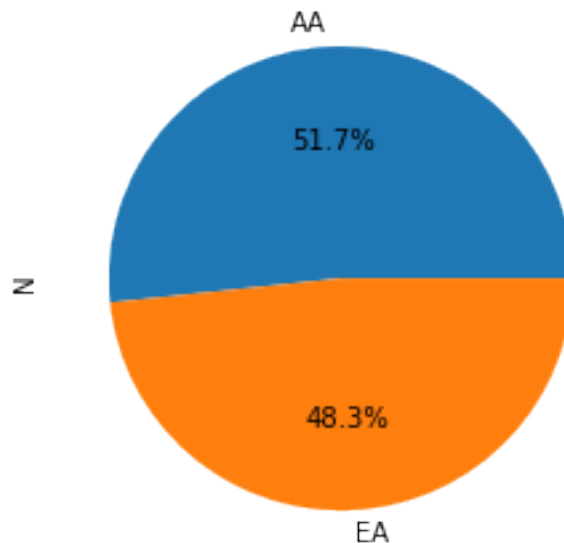
```
[5]: data = df.groupby(["Region", "Race"]).size().reset_index().rename(columns={0:
↳ "N"})
data
```

```
[5]:
```

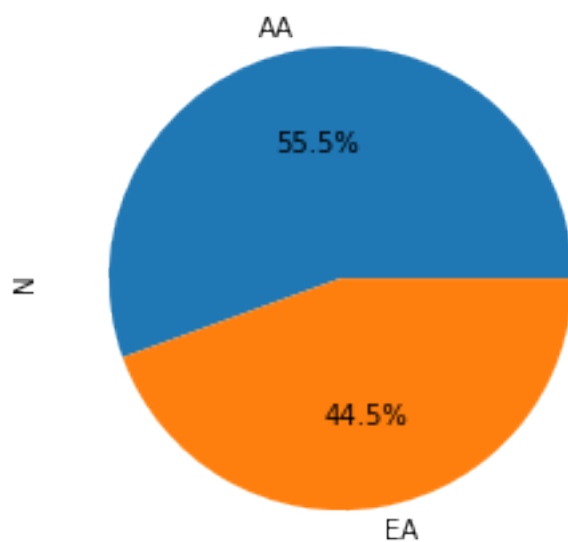
	Region	Race	N
0	Caudate	AA	217
1	Caudate	EA	203
2	DLPFC	AA	241
3	DLPFC	EA	193
4	DentateGyrus	AA	78
5	DentateGyrus	EA	83
6	HIPPO	AA	248
7	HIPPO	EA	199

```
[6]: caudate = data[(data["Region"] == "Caudate")].drop("Region", axis=1).
↳ set_index("Race")
dlpfc = data[(data["Region"] == "DLPFC")].drop("Region", axis=1).
↳ set_index("Race")
gyrus = data[(data["Region"] == "DentateGyrus")].drop("Region", axis=1).
↳ set_index("Race")
hippocampus = data[(data["Region"] == "HIPPO")].drop("Region", axis=1).
↳ set_index("Race")
```

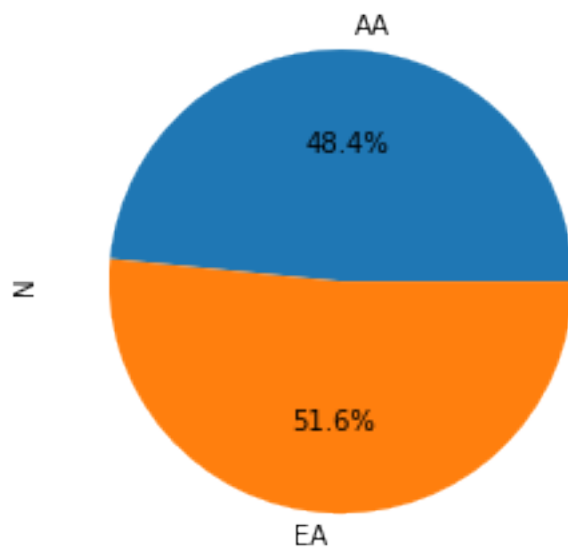
```
[7]: caudate.N.plot.pie(autopct="%.1f%%")
plt.savefig('caudate_pie.pdf')
```



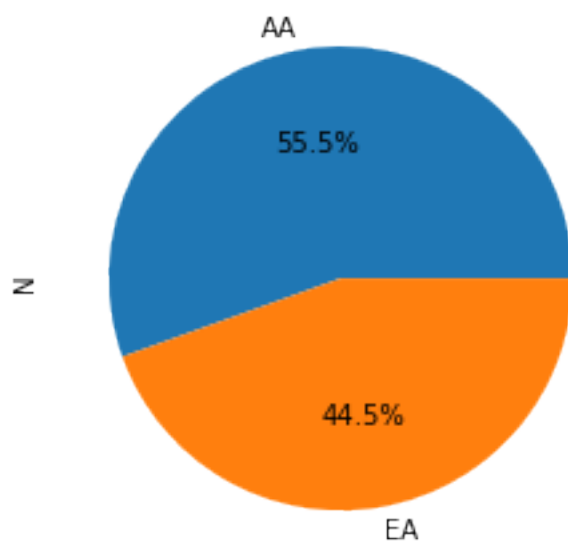
```
[8]: dlpfc.N.plot.pie(autopct="%.1f%%");  
plt.savefig('dlpfc_pie.pdf')
```



```
[9]: gyrus.N.plot.pie(autopct="%.1f%%");  
plt.savefig('dentate_gyrus_pie.pdf')
```



```
[10]: hippocampus.N.plot.pie(autopct="%.1f%%")  
plt.savefig('hippocampus_pie.pdf')
```



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[ ]:
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