

Another curiosity, how do top staked models (models != accounts) perform ?

[

cumulative

1200x800 80.1 KB

](https://forum.numer.ai/uploads/default/original/2X/8/844b251c7da7ffeabc9052a1a0c16cd846f114cf.png)

[Download the data](#), then plot

#!/usr/bin/env python3

```
import sys
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
```

```
if len(sys.argv) < 2:
    print("Usage:")
    print(f" {sys.argv[0]} round-xxx-yyy.csv")
    sys.exit(1)
```

```
CORR_COL='v2Corr20'
```

```
df = pd.read_csv(sys.argv[1])
```

keep only the needed columns

```
df = df[["corrWMetaModel", "mmc", "modelName", "payoutSettled", "selectedStakeValue", "tc", "v2Corr20", "roundNumber"]]
```

keep only staked models

```
df = df[df["selectedStakeValue"] > 1.0]
```

make sure of the sorting

```
df = df.sort_values(by="roundNumber", ascending=True)
```

```
plt.rcParams["figure.figsize"] = [12, 8] # default is [6.4, 4.8]
```

```
def plot(s):
    ax = ((s.fillna(0.) + 1.0).cumprod() - 1.0).plot(kind='line', legend=True, linewidth=3)
    return ax
```

```
tmp_series = df.groupby(['roundNumber']).apply(lambda x: x[CORR_COL].mean())
tmp_series.name = 'All staked models Mean v2Corr20'
plot(tmp_series)
```

```
tmp_series = df.groupby(['roundNumber']).apply(lambda x:
    (x[CORR_COL]*x["selectedStakeValue"]).sum()/x["selectedStakeValue"].sum() )
tmp_series.name = 'Stake Weighted v2Corr20'
plot(tmp_series)
```

```
tmp_series = df.groupby(['roundNumber']).apply(lambda x: x.nlargest(3, "selectedStakeValue")[CORR_COL].mean())
tmp_series.name = 'Highest 3 Staked Model Mean v2Corr20'
plot(tmp_series)
```

```
tmp_series = df.groupby(['roundNumber']).apply(lambda x: x.nlargest(10, "selectedStakeValue")[CORR_COL].mean())
tmp_series.name = 'Highest 10 Staked Model Mean v2Corr20'
plot(tmp_series)
```

```
tmp_series = df.groupby(['roundNumber']).apply(lambda x: x.nlargest(30, "selectedStakeValue")[CORR_COL].mean())
tmp_series.name = 'Highest 30 Staked Model Mean v2Corr20'
ax = plot(tmp_series)
```

```
ax.get_figure().savefig(f"cumulative.png")
```