What's new in pandas?

Python Meetup January 2015
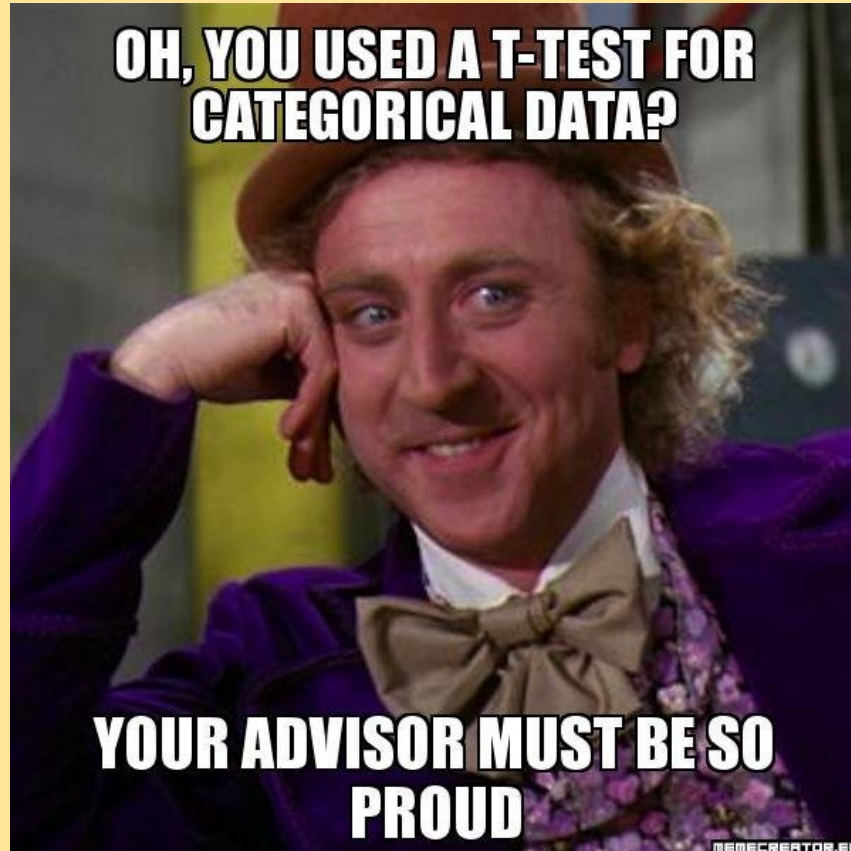
So, what's new in pandas?

- Categorical Data
- Timedeltas
- MultiIndex Slicers
- *.dt* accessor

Categorical Data

- Discrete & Limited Set of Values

    - Gender: Male, Female

    - Meal: Breakfast, Lunch, Dinner

- Possibly ordered by something
    - non-lexical
- Representation saves memory
- Codes have meaning (export)

Categorical Data

Categorical Data

Timedeltas

- Track Intervals of Time
- Diff Datetimes / DatetimeIndexes
- 0-based time-like data

Timedeltas

Timedeltas

MultiIndex Slicers

- Introduced in 0.14
- Allow multi-dimensional index slicing 'easily'
- Replace the need for *.xs*
- Allow setting
- Future Thoughts

MultiIndex Slicers

.dt accessors

- disambiguate values vs index
- allow the select attribute
  based on the type of object
- selective tab completion

```
In [2]:

idx = pd.date_range('20130101 01:23:45.678',periods=3,freq='12H')
s = Series(idx,index=idx+pd.Timedelta('1d'))
s

Out[2]:

2013-01-02 01:23:45.678000    2013-01-01 01:23:45.678000
2013-01-02 13:23:45.678000    2013-01-01 13:23:45.678000
2013-01-03 01:23:45.678000    2013-01-02 01:23:45.678000
Freq: 12H, dtype: datetime64[ns]
```

What's in the future?

- IntervalIndex
- CategoricalIndex
- pd.String
- TZ aware blocks
- dynd
- bcolz / virtualized DataFrames

https://github.com/libdynd/dynd-python

https://github.com/Blosc/bcolz