Final Project in Python

z-tests

One proportion

- Compare one thing to a whole
  - One categorical component

Two proportion

- Compare ratio to a whole
  - Two categorical components

Code for z-tests

```
count = # or np.array([#, #])
nobs = # or np.array([#,#])
value = # (only for one proportion!)
stat, pval = proportions_ztest(count, nobs, value)
print(stat,pval)
```

Independent Chi-Square

- Both IV and DV are categorical
- Comparing frequencies by category

Making a Pivot Table

TableName = pd.pivot_table(dataFrame, index="column", columns="column", values="column")

	Location	PetType	NumberTherapyVisitRequests
0	1	Gecko	29
1	1	Puppy	73
2	1	Cat	2
3	1	Hamster	39
4	2	Gecko	39

Location	1	2	3
PetType			
Cat	2	10	22
Gecko	29	39	82
Hamster	39	66	193
Puppy	73	117	304

Using the Pivot Table in a Chi-Square

```
stats.chi2_contingency(pivotTable)
```

One Way ANOVAs

- One categorical IV
- One continuous DV

- Comparing means of the categories

I’m melting...

- Melt is a type of reshaping

```
NewDataFrame = pd.melt(dataFrame,
var_name=“column1”, value_name=“column2”)
```

Data Wrangling and Assumption Testing

- Recode categories to numbers
- Check normality and adjust
- Check for homogeneity of variance