Lecture 9
Functions
Announcements

- HW 3 out, due Friday at 5:59PM, usual 1 point bonus for turn-in on Thursday.
- Lab 4 out.
- Project 1 coming out this Friday. Find a partner from your own section.
Comparing Histograms
Sir Francis Galton

- 1822 - 1911 (knighted in 1909)
- A pioneer in making predictions
- Particular interest in heredity
- Charles Darwin's half-cousin

(Demo)
Overlaid Graphs

For visually comparing two populations

(Demo)
Defining Functions
Def Statements

User-defined functions give names to blocks of code

```python
def spread(values):
    return max(values) - min(values)
```

(Demo)
Apply
Apply

The `apply` method creates an array by calling a function on every element in input column(s)

- First argument: Function to apply
- Other arguments: The input column(s)

```
    table_name.apply(function_name, 'column_label')
```

(Demo)
Example: Prediction