

#### Lecture 9

**Functions** 

#### **Announcements**

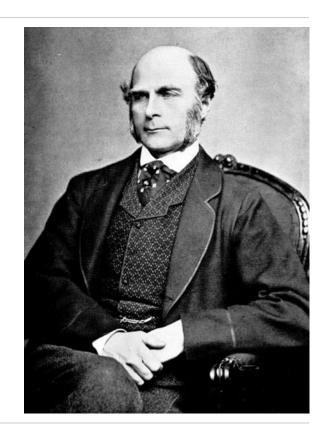
- HW 3 out, due Friday at 5:59PM, usual 1 point bonus for turn-in on Thursday.
- Lab 4 out.
- Project 1 coming out this Friday. Find a partner from your own section.

### **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

```
Name
                Argument names (parameters)
def spread(values):
                             Return expression
     return max(values) - min(values)
Body
                     (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**