

# Crafting with Data

Reality, Illusions, Truth & the Future

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Instructor: Rob Faludi

# Plan for Today

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- Class documentation and discussion
- Discuss reading in chapters
- Exercise One: Article report
- Demo: Arduino Data gathering
- Readings & Assignments

# Class Documentation & Discussion

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- Send me links for your documentation of every assignment
  - what you did, what you found, what you learned, pictures, video, links
  - due along with with assignment
  
- Discussion List, sign up now if you haven't already

# **HOW TO LIE WITH STATISTICS**

**Darrell Huff**  
**Illustrated by Irving Geis**



**Over Half a Million Copies Sold—  
An Honest-to-Goodness Bestseller**

The Sample with the Built-in Bias

# The Well-Chosen Average

The Little Figures That Are Not There

Much Ado about Practically Nothing



# The Gee-Whiz Graph

# The One-Dimensional Picture

# The Semi-attached Figure

Post Hoc Rides Again

How to Statisticulate

# How to Talk Back to a Statistic

...Final thoughts

# Exercise One

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- Article Presentation
  - In groups of 3, compare your articles and pick one to present
  - Present your chosen article to the class



# Demo: Arduino Data Gathering

# Readings and Assignments

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- Readings

- The Canon, by Natalie Angrier — Chapter 1: *Thinking Scientifically*
- The Scientific Method, Jose Wudka — [http://phyun5.ucr.edu/~wudka/Physics7/Notes\\_www/node5.html](http://phyun5.ucr.edu/~wudka/Physics7/Notes_www/node5.html)

- Assignment

- Use an Arduino to gather 500 samples of interesting data in two different conditions (1000 samples total). Post your data online so it can be downloaded.

