

Econ 270 Lecture 1

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iClicker Test Pop Quiz

Immediately after a basketball leaves a player's hand after taking a 3 point shot, the force on the ball is

- ▶ A Upwards and constant
- ▶ B Upwards and decreasing
- ▶ C Downwards and constant
- ▶ D Downwards and decreasing
- ▶ E Tangent to the path of the ball

Why this course is useful

- ▶ Data is being used in increasing rates in every job field
- ▶ Routine tasks are being automated by AI or offshored
- ▶ Employers are reluctant to hire gen Z workers
 - ▶ High bar for interviews at good companies
 - ▶ Most interviews have an analytic component!

Labor Force Participation Rate

Civilian labor force participation rate, seasonally adjusted

Click and drag within the chart to zoom in on time periods



Source: U.S. Bureau of Labor Statistics.

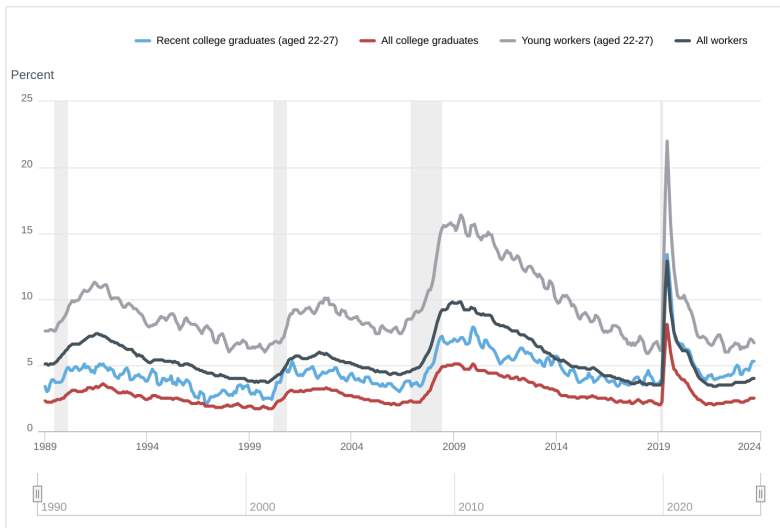


New College Graduate Success

- ▶ over half of hiring managers believe new college graduates are unprepared for the workforce (intelligent.com survey)
- ▶ New graduates are being fired at higher rates than in the past
- ▶ At least partly due to dilution of the education system, including college

Unemployment rates

Unemployment Rates for Recent College Graduates versus Other Groups



Source: U.S. Census Bureau and U.S. Bureau of Labor Statistics, Current Population Survey (IPUMS).

Bunny Intermission



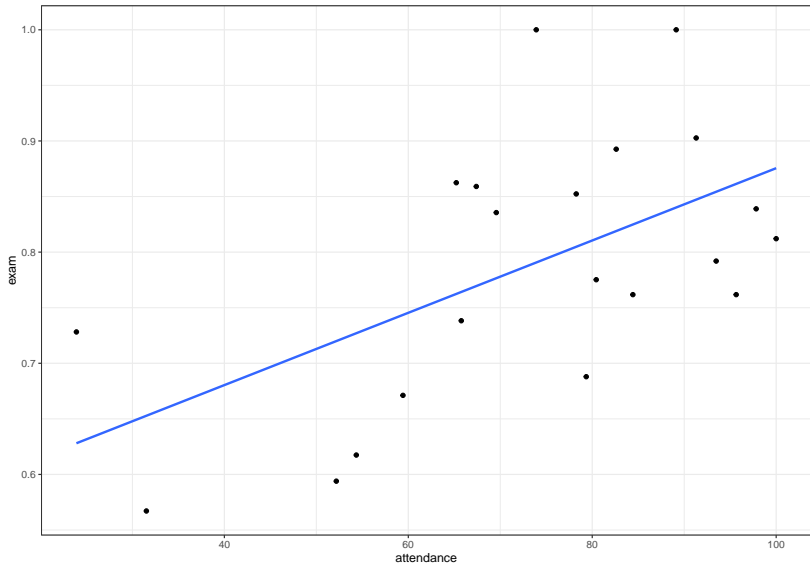
How to Get Ahead

- ▶ Need to signal quality to interviewers to get interviews
- ▶ Improve technical skills to pass interviews
- ▶ Developing statistical knowledge and working on projects is the best way
- ▶ College is still a good return on investment

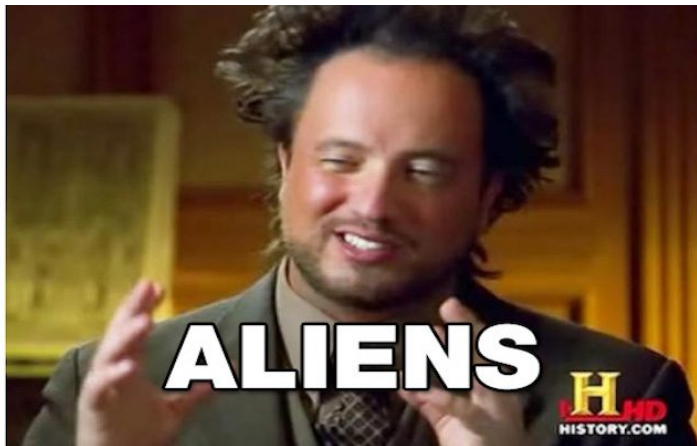
An example of statistical analysis

- ▶ Should I make attendance mandatory?
- ▶ How would I go about answering this question?

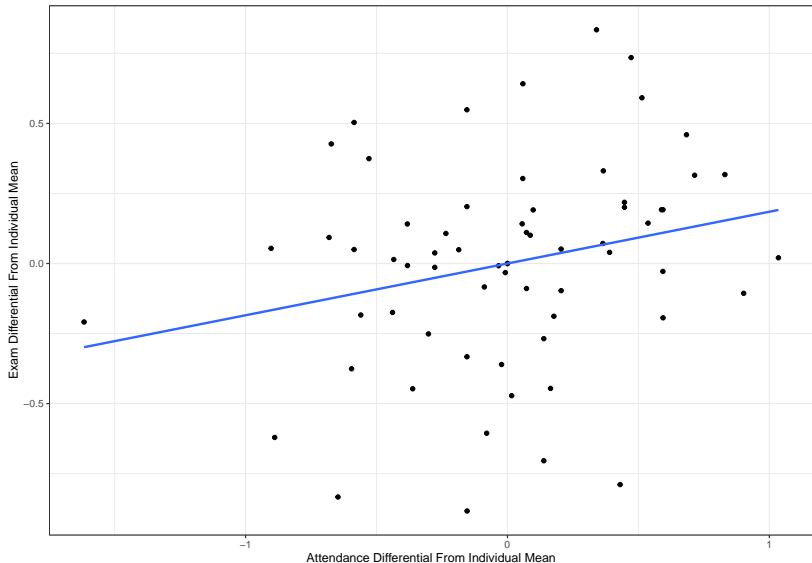
Data Simulated From Class Data



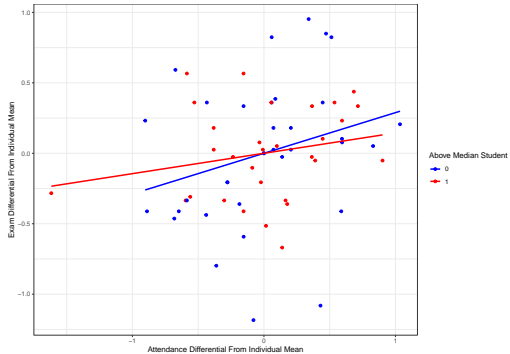
Is This Strong Evidence?



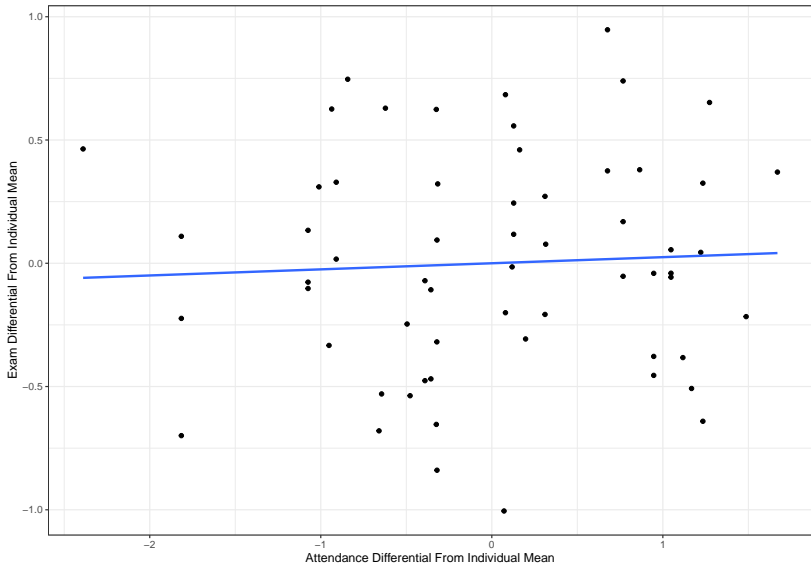
Attendance Fluctuations



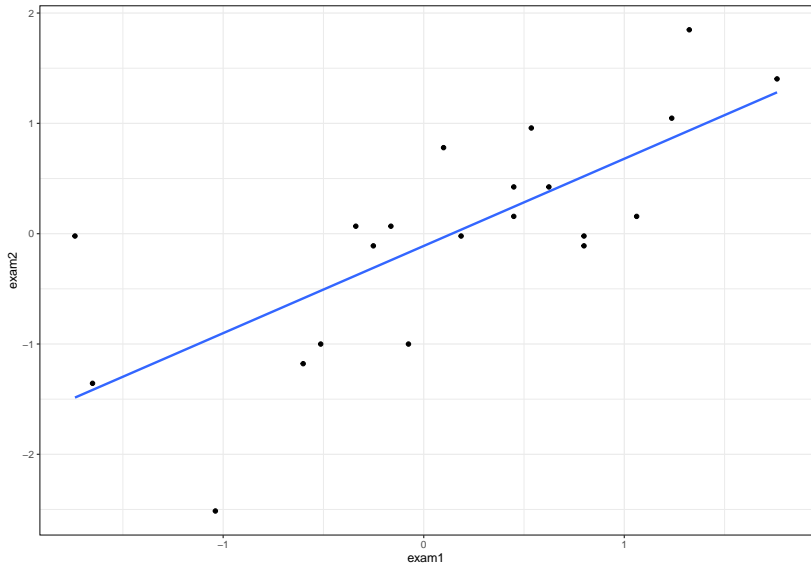
Heterogeneity



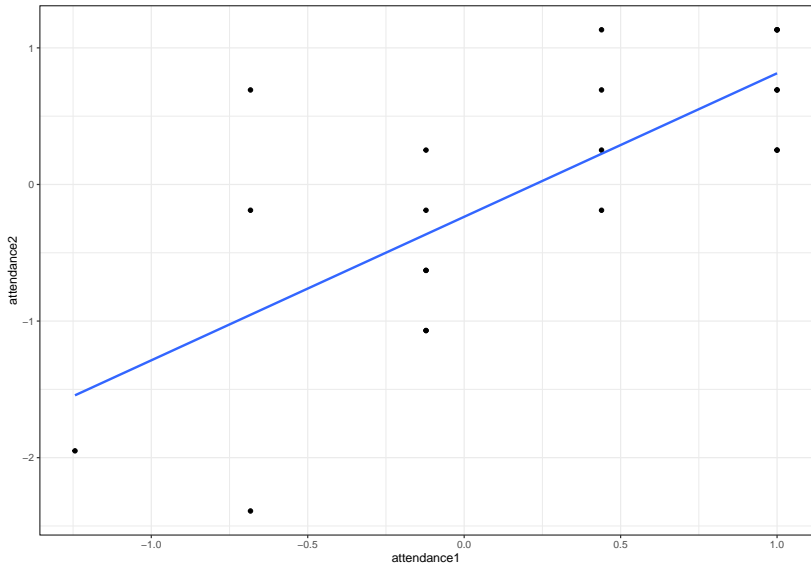
Consistency?



Score Persistence



Attendance Persistence



My Takeaways

- ▶ Exams are consistent for most students
 - ▶ But that I should still offer some 'cushion points'
- ▶ Attendance probably improves performance
 - ▶ Effect is probably "small"
 - ▶ "Attendance" is only a proxy for effort. May break down!

Applications

- ▶ You should apply similar thinking to your job
 - ▶ Everyone will use metrics. But the metrics will be misinterpreted
 - ▶ Sales are down. Why, and what should we do about it?
- ▶ Our goal is to get an understanding of the statistical properties of data
 - ▶ So that we don't make decisions based on random chance

Tying it Together

- ▶ Bad employment outcomes, poor student practices, and poor data analytics are related
- ▶ By putting effort into learning quantitative skills you'll be in a better position when you graduate