Business Analysis Fall 2022

Class 1

Sri Akhil Jonnalagadda
sjonnala@stedewards.edu

About Me

- Masters/Bachelors Economics for The University of Texas at Austin
- Research interests are in healthcare and energy economics.
- Big soccer guy, loves to cook and recently into endurance sports.
- Feel free to ask about my work as a Data Scientist/Economist

About This Course

- This is a graduate level introductory BA course.
- To introduce the conceptual framework of business analytics, including the ethical issues and social impact of data analytics.
- To build familiarity with the basic R toolkit for statistical analysis.

Course Grading

Graded Item	% of Final Grade
Discussions	15
Live Sessions	10
Quiz	15
Assignments (week 1-6)	40
Final Assignment (week 7)	20

Learning Objectives

- Why Business Analytics
- Types of Data and decisions
- Variables and Measurements

Why R and why business analysis

- R is a popular tool and integrated with modern tools
- R is a statistical tool
- Compelling solutions are data driven
- Its a great career- plenty of growth year on year

Cases

- How does Amazon recommend you products
- How do airlines prices changes
- How did we track covid

A few ideas

- Descriptive analytics: What has happened?
  - the use of data to understand past and current business performance and make informed decisions.
- Data Query
- Predictive analytics: What could happen in the future?
  - Predict the future by examining historical data, detecting patterns or relationships in these data, and then extrapolating these relationship forward in time.
- Prescriptive analytics: What should we do?
  - identify the best alternatives to minimize or maximize some objectives.

Big Data

- Volume: immense amount of data compiled for a single for multiple sources
  Velocity: generated at a rapid speed, management is a critical issue. Variety: all types, forms, granularity, structure or unstructured.
- Additional characteristics
- Veracity: credibility and quality of the data, reliability
  Values: methodological plan for formulating questions, curating the right data , and unlocking hidden potential
- However, having a plethora of data does not guarantee that useful insights or measurable improvements will be generated.

Types of Data

- A variable is a characteristic of interest that differs in kind or degree among various observations.
  There are two types of variables: categorical and numerical
- Categorical:
  Also called qualitative
  Represent categories
  Arithmetic operations on the labels/values are not meaningful Coded into numbers for data processing
  Example: marital status, gender
- Numerical:
  Also called quantitative
  Represent meaningful numbers
  Arithmetic operations are meaningful
  Discrete: assumes a countable number of values
  Example: number of children in a family
  Continuous: assumes an uncountable number of values within an interval
- Example: investment returns

Lets hop into it

- Get R going
- How to code:
  - How to ask questions
  - Resources
  - How to learn
  -