# Welcome to the world of Econometrics









#### This is me!

#### **Pedram Jahangiry**

Professional Practice Assistant Professor Department(s):

Economics and Finance



#### **Contact Information**

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Personal Website
Curriculum Vitae

#### **Education**

PhD, Economics, Arizona State University, 2017 Master, Economics, Simon Fraser University, 2013 MBA, Sharif University, 2012 Industrial Engineering, IUST, 2009

#### **Biography**

Pedram Jahangiry, PhD, CFA, is an assistant professor in the Economics and Finance Department of the Jon M. Huntsman School of Business at Utah State University. Prior to joining the Huntsman School in 2018, Pedram was a research associate within Financial Modeling Group at BlackRock NYC. His research is involved in machine learning applications in finance, empirical asset pricing, and factor models.



## Meet The TAs



Tristan Peterson

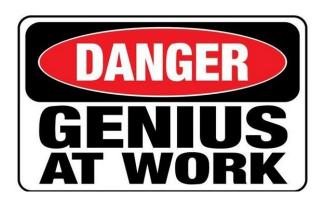


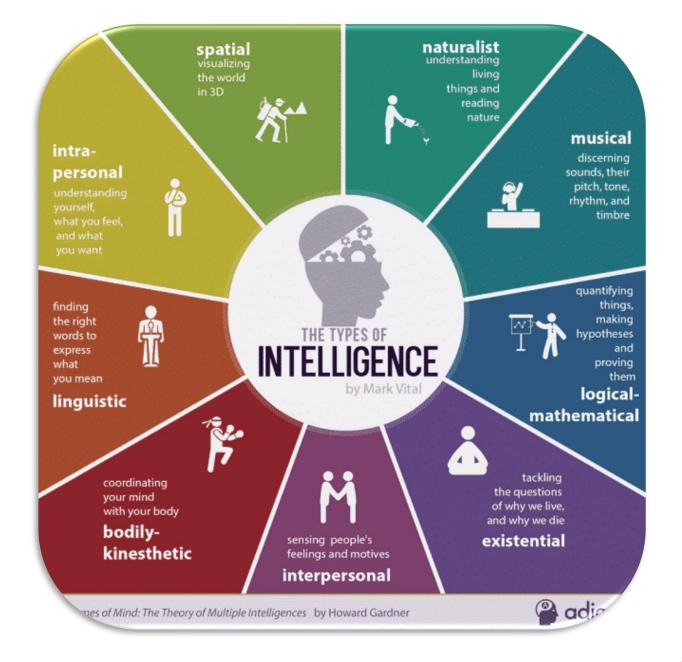
David Jung



## Who YOU are!



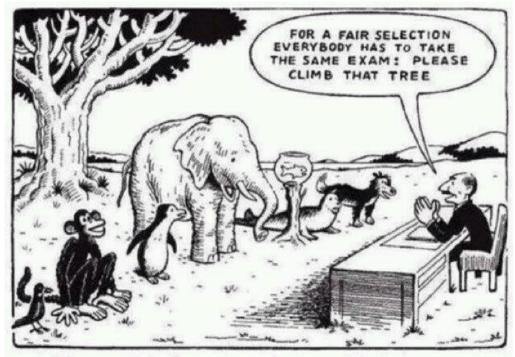








#### My Teaching Philosophy



# Our Education System

"Everybody is a genius. But if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid."

- Albert Einstein





#### What's on Canvas?

Syllabus

Zoom

**Pages** 

Grades People Quizzes

**Files** 

My Media

Banner

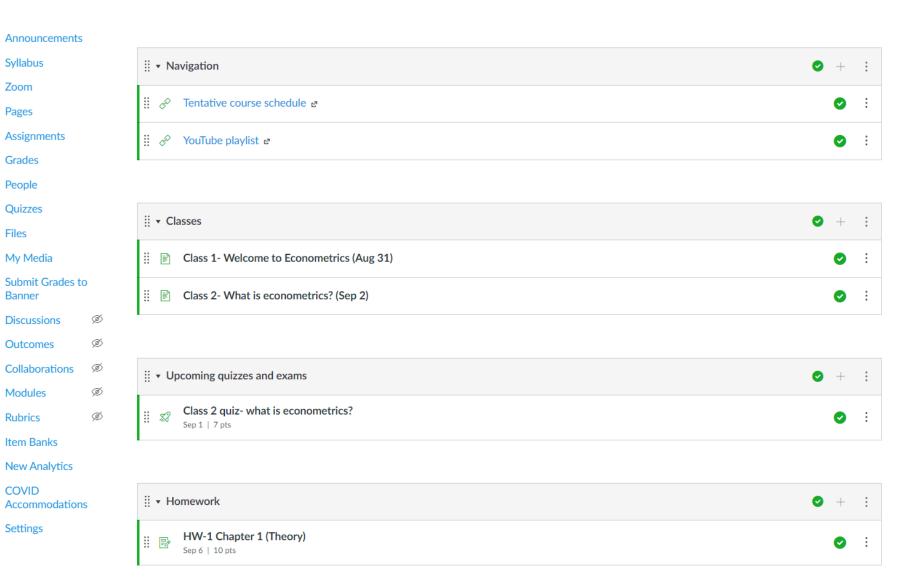
Outcomes

Modules

**Rubrics** Item Banks

COVID

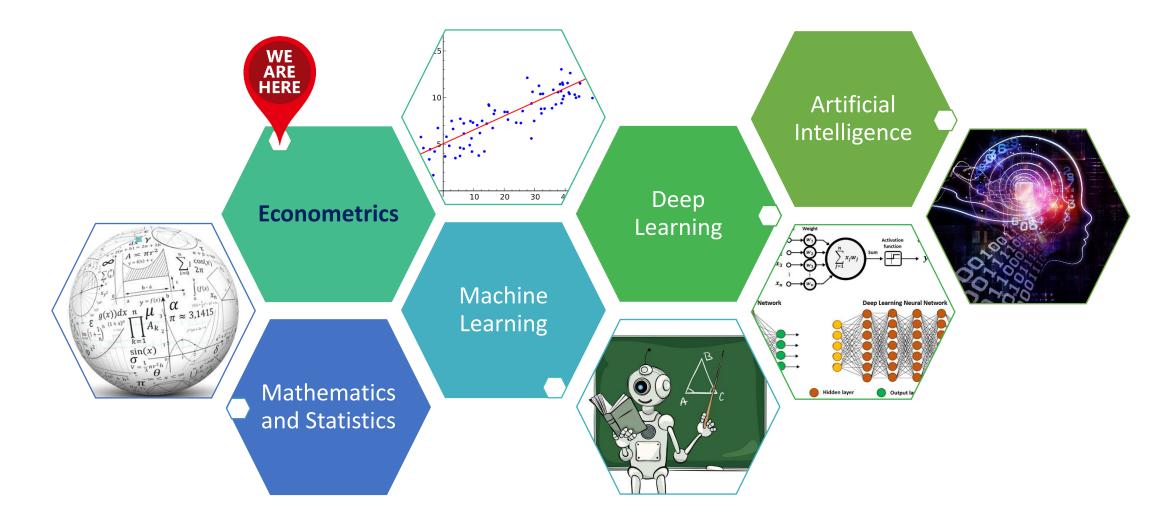
Settings







## Where we are?







# Big picture



What are we trying to do as a researcher?



Solve real world problems, right?



Is there a theory?

#### What is the relationship between

- Sales and advertisement / R&D expenditure / seasonality / industry / ... ?
- Quantity demanded and price / income / technology / price of competitors / ... ?
- Wage and education/ age/ gender/ experience/ ...?



## A simple example

- Let's see if we can predict your future salary! (is there a theory?)
- What are the drivers:
  - Education, age, experience, IQ, ...
  - Ethnicity, race, gender, ...
  - Industry, location, working hours, ...
- Let's build a model (assuming a linear functional form!)



$$wage = \beta_0 + \beta_1 educ + \beta_2 age + \beta_3 exper + \beta_4 IQ + \dots + \beta_k hours + u$$

- ➤ Can you **interpret** this model? Do you care about the interpretability?
- ➤ Can you make **predictions** using your model?
- ➤ Can you make this functional form more flexible? What are the caveats?





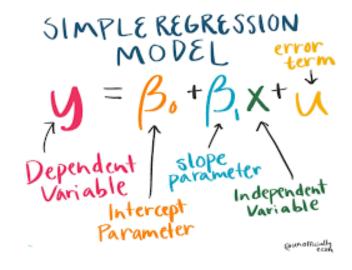


- 1. Enable you to become intelligent readers of others' econometric analysis. Go beyond accepting all results at face value!
- 2. Teach you to conduct elementary econometric research.
- 3. Prepare you to take more advance courses like machine learning and deep learning.



# Why should I learn it?

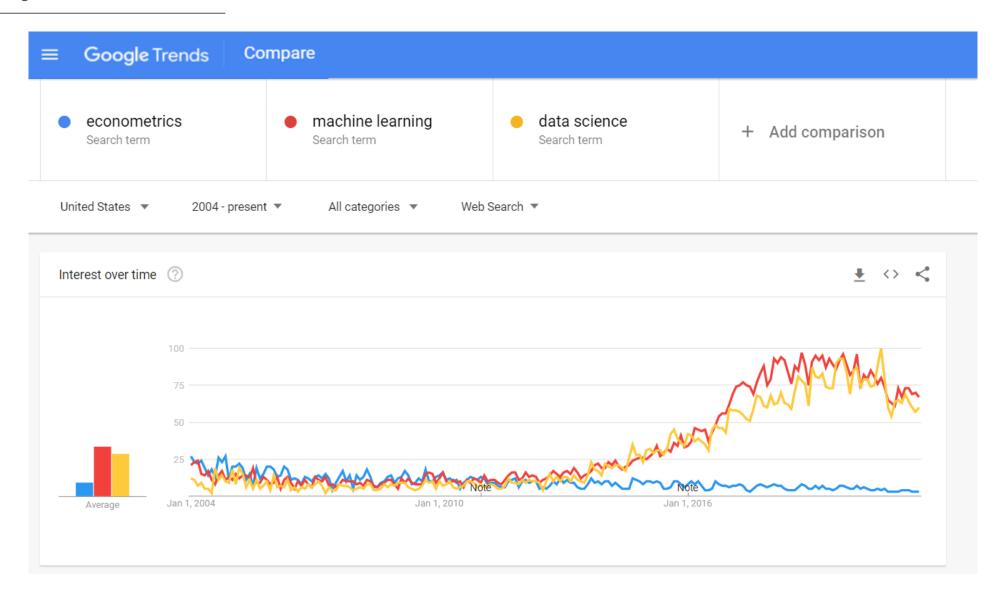
- ✓ It is a bid deal
- ✓ Enables you to support your story with facts
- ✓ It is closely linked to data science
- ✓ Better Career Opportunities
- ✓ Better salaries
- ✓ Hedge against next recession







# Why should I learn it?







#### What matters most?

#### The Pale Blue Dot

"That's here. That's home. That's us. On it everyone you love, everyone you know, everyone you ever heard of, every human being who ever was lived out their lives. The aggregate of our joy and suffering, thousands of confident religions, ideologies, and economic doctrines, every hunter and forager, every hero and coward, every creator and destroyer of civilization, every king and peasant, every young couple in love, every mother and father, hopeful child, inventor and explorer, every teacher of morals, every corrupt politician, every "superstar", every "supreme leader", every saint and sinner in the history of our species lived there on a mote of dust suspended in a sunbeam."

— Carl Sagan † 1996







With the potential for students to learn basic content (e.g., terminology, calculations, etc.) in a virtual-based setting, classroom time will be used more to make mistakes in a safe environment, reason with others, brainstorm, and take part in other critical thinking exercises.



# You will be surprised to see what you can do when someone is counting on you!

I am counting on YOU



