

DATS 6450 – CS Foundations

Week 1



Class Overview

- Introductions
- Course Expectations
- Syllabus Review
- Data Science Industry Discussion
- Short Exercise
- Home Early!

Introductions

- Michael Arango
 - Education
 - BS Mathematics & Economics, Covenant College
 - MS Data Science, GWU
 - Current Role
 - Data Scientist, Deloitte

Introductions

- Brent Skoumal
 - Education
 - BS Mechanical Engineering, University of Utah
 - MBA, Business Analytics, University of Utah
 - MS Data Science, GWU
 - Current Role
 - Data Scientist, Capital One

Introductions

- Introduce yourself
 - Name
 - What is your ideal position upon graduating?
 - What do you want to get out of this course?
 - What is your background? Work experience?
 - What is your knowledge of Computer Science?
 - Fun fact about yourself or hobby

What is Data Science?

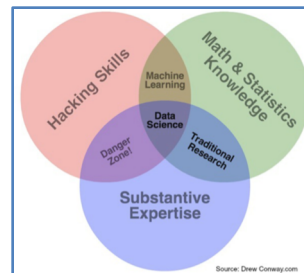
- How is it related to...
 - Computer Science?
 - Computer Engineering?
 - Data Engineering?
 - Software Engineering?
 - Software Development?
 - Applied Mathematics?
 - Machine Learning?
 - Cloud Computing?

What makes a good Data Scientist?

Depending on the industry and the size of the company, a “Data Scientist” can mean anything.

My personal opinion:

- Good Problem Solver
- Curious (likes to figure things out)
- Solid understanding of mathematics/quantitative reasoning
- Not afraid to learn/teach themselves



Origin of the Course

- This course was created to address gaps in the current curriculum
- Disconnect between academia and industry
- Practical tools and techniques for success in the rest of your classes and job after graduation

Who is this course for?

- This course is intended to fill in the narrative around computer science and software development and how they relate to the data science workflow
 - The foundations
- This is *not* intended to be a theory-heavy CS course (compilers, binary trees, etc.)

Syllabus Review

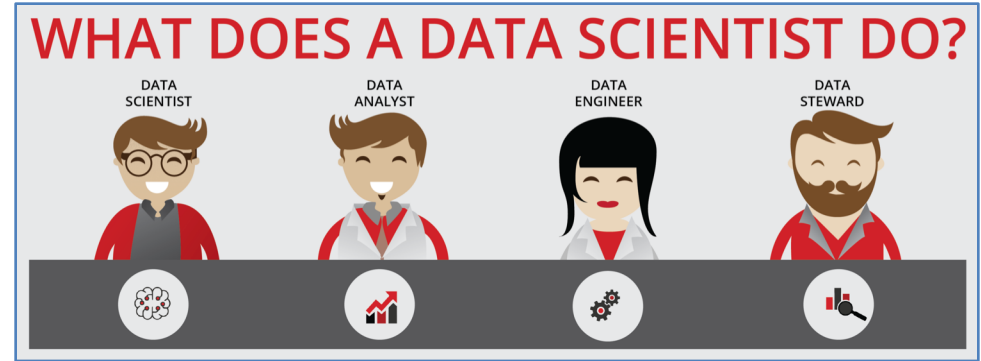
- The course syllabus can be found on Blackboard or on the course GitHub repo: <https://github.com/GW-DATS/dats6450-csfoundations>

Course Expectations

- We hope our classroom has a very open culture that fosters discussion and collaboration, but take academic dishonesty very seriously
 - Do your own work
 - We're more concerned with your learning process than perfection
- Wiggle room near the end of the semester to adjust course materials and add special topics
- Possible guest lectures from industry experts

Data Science Industry

- Observations
- Interview Process
- Daily work
- Tools
- Impact
- Q&A



Short Exercise

- Spend 10-15 minutes researching linkedin/indeed for your “dream job”
 - Can be for any company, any location
 - Write down the title of the job
 - Write down the company name/industry
 - Write down the main job requirements (and years of experience)

Next Class

- Setting up the Tech Stack and familiarization
 - Slack
 - Git installation
 - GitHub profile
 - DataCamp Profile and Access
- Intro to Computer Science
 - Computer Architecture
 - Hardware
 - Operating Systems