DATA SCIENCE 11 WEEK PART TIME COURSE

Week 10 - Less Technical Skills (but still really important) Wednesday 18th May 2016 AGENDA 2

- 1. Non technical skills
 - 1. Communication
 - 2. Presentation
 - 3. Networking
 - 4. Résumé
 - 5. Interviews
- 2. Lab
- 3. Discussion

TEMAIL ONE OF THE GUEST PRESENTERS OF THIS CLASS









COMMUNICATION

COMMUNICATION 5

- Who's the audience?
- Clear and concise
- Know the business
- Always ask why
- What's the lever?
- Over-Communication is better than under-communication
- Listen hard
- Break bread



- Does it reveal something that couldn't be done in Excel?
- No speling errors!
- What would happen if your document was forwarded to other people in the organisation?
- Are you communicating in the same language?

PRESENTATION

PRESENTATION

- How you present your work will determine if it gets implemented.
- If your work isn't implemented then it's worthless
- Start with the results and action then dive into how you got there.
- Can your audience understand what's in front of them?
- What questions do you think your audience will have?
- Peer Review

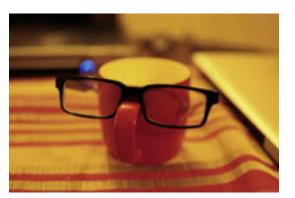
- Explain complex concepts in three stages if you have a mixed audience
 - 1. Very general level something your Mum would understand
 - 2. Slightly technical something an analyst would understand
 - 3. More technical something a peer would understand that communicates the key points

NETWORKING

NETWORKING 11

- Sydney is an incredibly connected place for Data Science
- Meetups are a great way to socialise and find people with common interests.
- Conferences are great too (but harder to make lasting connections)
- Your workplace may have some great people you may not have realised - talk to people!





RÉSUMÉ

RÉSUMÉ - from <u>datascienceresume.com</u>

- Tailor it to the position you are applying for
- Relevant experience
- Format
 - Keep it to one page
 - Use past tense
 - Keep any descriptions succinct
 - Avoid colour coding
 - Send it as a pdf (the best way to ensure there are no scaling issues)

RÉSUMÉ - from <u>datascienceresume.com</u>

- Only include a "Interests/Hobbies" section if
- (a) you make it specific such that it conveys something about yourself
- (b) you have the sense from networking / interactions with the company you're applying to, that they value some of the softer skills.

RÉSUMÉ - from <u>datascienceresume.com</u>

Proof Points

- Relevant thesis
- Relevant course(s) taken and grades if available
- Independent projects completed (e.g., Kaggle, self-driven work)
- Github profile especially with the code from the independent projects
- Technical blog

RÉSUMÉ 16

- Don't lie
- Brush up on technology you use before an interview
- Highlight the benefits of your analysis (e.g. x% reduction in customer churn which increased revenue by \$y)
- What were some of the major projects you worked on?
- What was the purpose of them?
- What did you contribute?
- What technologies did you use to complete the project?

INTERVIEWS

INTERVIEWS 18



TOP DEFINITION



real recognize real

An idiom of hip hop culture used to refer to the tendency or ability for real individuals to identify, connect with, or otherwise respect, other real individuals. The usage of real is identical to that in the more generic phrase keepin' it real, i.e. genuine, true.

Scalia: "I think equal protection is the most overextended rational in modern day justice"

Roberts: "agreed"

Scalia: "We see eye to eye on this don't we?"

Roberts: "Hey, real recognize real."

Scalia: "word"

by kelzobaggins November 14, 2007







INTERVIEWS - TYPICAL TECHNICAL QUESTIONS

- What is R² (for linear regression)
- How do you assess whether to include a variable in a linear regression model?
- How would you assess model accuracy?
- Explain what regularization is and why it is useful.
- Explain what resampling methods are and why they are useful. Also explain their limitations.
- Give an example of how you would use experimental design to answer a question about user behaviour.

INTERVIEWS - TYPICAL TECHNICAL QUESTIONS

- What is a recommendation engine? How does it work?
- Which tools do you use for visualization? What do you think of Tableau? R? SAS? (for graphs). How to efficiently represent 5 dimension in a chart?
- Are you familiar with pricing optimization, price elasticity, inventory management, competitive intelligence? Give examples.
- How can you prove that one improvement you've brought to an algorithm is really an improvement over not doing anything?

INTERVIEWS - HILARY MASON'S QUESTIONS

- 1. What was the last thing that you made for fun?
- 2. What's your favourite algorithm? Can you explain it to me?
- 3. Tell me about a data project you've done that was successful. How did you add unique value?
- 4. Tell me about something that failed. What would you change if you had to do it over again? ...
- 5. You clearly know a bit about our data and our work. When you look around, what's the first thing that comes to mind as "why haven't you done X"?! ...

INTERVIEWS 22

DATA SCIENCE HANDBOOK ADVICE AND INSIGHTS FROM 25 AMAZING DATA SCIENTISTS FOREWORD BY JAKE KLAMKA DJ Patil, Hilary Mason, Pete Skomoroch, Riley Newman, Jonathan Goldman, Michael Hochater, George Roumellotis, Kevin Novak, Jace Kohlmeier, Chris Moody, Erich Owens, Luis Senchez, Eithon Cadag, Sean Gourley, Clare Corthell, Diane Wu, Joe Biltzstein, Josh Wills, Bracley Voytek,

Michelangelo D'Agostine, Mile Dewar, Kunal Punera, William Chen, John Foreman, Drew Conway

BY CARL SHAN HENRY WANG WILLIAM CHEN MAX SONG



DATA SCIENCE - Week 9 Day 2

DISCUSSION

- ▶ Presentations
- Tasks

PRESENTATIONS

- > 10 mins presentation with 5 mins for questions
- ➤ What did you do?
- What were the results?
- What did you achieve?
- ➤ What did you learn?
- What else will you try in the future?
- Appendix with any interesting findings

DATA SCIENCE - Week 9 Day 2

Task List

Let me know if you'd like to present on Monday or Wednesday

□Do a draft outline of the talk

□Do more modelling:)