

Who am I...?

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- Let's make this an Q&A – interrupt me...please!

Transitioning from Academia to a Commercial Domain

- Can be difficult to get traction in a job search early on.
- It is hard to translate your experience.
 - *Different terminology, different goals & objectives*
 - *GTRI, Sober Lab, etc. some confidential work, harder to showcase bottom line impact.*
- A lot of companies don't understand/appreciate the work, challenges and experience that is gained in an advanced degree.
 - *It is your job to showcase that to them.*
- What the hell does Data Science even mean?
 - *This is the hottest concept on the market right now. Companies want to say they are doing Data Science, even if they haven't defined what it is to them, understand their goals, etc.*

Possible Data Science Responsibilities

- Pure Statistics and Analytics
- Data Architecture & Data Engineering
 - *SQL & NoSQL Data Stores, Data Cleansing & Movement (ETL), Data Validation & Processing Data Lake Architecture & Access*
- Data Visualization
 - *Tableau, QlikView, JavaScript – D3.js, Angular, Highcharts*
- Software Development
 - *Prototyping software POC's*

Where do I fit?

- In some organizations, that is 1 person doing all of those things.
 - *Ask companies how they define Data Science*
 - *Understand your strengths, your weaknesses, your passions*
 - *If you can't explain to someone what you do as well as what you want to be doing moving forward, it is hard for them to visualize how they can help you.*

Resume

- Find a version, or two, that best represents your skills
- It's impossible to satisfy everyone's advice
- Be vivid – spoon feed your audience! (People = Lazy)
 - *1st person reading your resume likely isn't a technologist or Data Scientist – they may just be scanning for key terms.*
 - *Be clear in what you're looking for & do (Objective can be quite helpful)*
 - *Key Terms are well displayed in a "Skills Summary" section*
 - *Reuse those terms throughout your resume, in your experience section – allows your experience to translate more cleanly when someone visions how you could help their environment*
- David's resume

Skills & Keywords

- Python, R, C++, Java, Scala, SQL, SAS
- Hadoop, MapReduce (EMR), Hive
- Redshift, Amazon S3, RDS, Data Pipeline
- Spark (PySpark)
- Machine Learning / Artificial Intelligence – TensorFlow, Theano, Keras, MLlib (Spark), mlpack, Scikit
- Cloud – AWS, Azure, Google Cloud Amazon Machine Learning, EMR, Azure ML Studio

Interviewing

- This is a skill – continue to practice
- Prep is extremely important:
 - Have done your research on the company
 - Research the backgrounds of interviewers
 - Prepare thought provoking questions
 - Be able to speak to everything on your resume...use “I” terminology as opposed to “we”
 - Bring notebook – write down what you were asked
- Strong closing!
 - Find your own voice in addressing concerns

Advice & Insight — Sr. Data Scientist – Ph.D. @ AT&T

- Commercial domains are not in the business of creating new knowledge like academia or research labs. It is more focused around applying knowledge to create products and services, even though a company may give a title of research or data scientist.
- Writing in depth research papers or deep technical reports starts to become less relevant than creating products and services.
- Being able to apply state of the art algorithms is more important than creating such algorithms or techniques
- An applied Ph.D. with specific skills (Comp. Sci., Math, Stats) will serve you well...maybe just not right away. Be patient.

Advice & Insight – V.P. Data Science – Fortune 100 Innovation Lab

What do you look for in more junior candidates or those coming out of an advanced degree program?

- *I love someone with a natural curiosity. It comes across in the genuine questions that they ask.*
- *I'll ask someone, "what is the last thing that you learned on your own?"*
- *An advanced degree is important to me. It shows me completion and accomplishment. That is a differentiator to me.*
- *It is important that the person has a level of humility to themselves. Some highly educated candidates, myself included, take a little while to learn that it is okay to not be the smartest person in the room.*
- *How do you translate what you've learned to a business. Do you have the maturity to understand bottom line impact to a business?*

Advice & Insight – Manager of Data Science – Marketing Software Company

What do you wish you knew when you started your career?

- I have learned that academia moves way too slowly, but companies move way too fast. There is no happy medium and that is frustrating...you have to find a way to deal with that.
- The laws of thermodynamics apply to all projects...including Data Science. Not appreciating how the inevitable, ever-increasing technical debt threatens to ruin every project within some time horizon that practitioners should be mindful of trying to keep at bay
- Among other things, this concerns ensuring a good understanding of the underlying question, the available data & the expected deliverable. It also means having strong habits for planning the work, documenting what's being done and why, version controlling code for later reference, etc. People are even applying the concept of "unit testing" to well-structured, modular analysis code using mock data to ensure it makes the right transformations or handles edge cases well.

Advice & Insight – Manager of Data Science – Marketing Software Company

Continued...

- The critical role of “soft” people skills in continual, clear communication about all of the above to other stakeholders and collaborators. Lone wolf and cowboy mentality is dangerous to most companies.
- These are generally understood except in Data Science which is in the “Wild West”
- Companies ask kids to work magic and peddle snake oil as if these issues don’t apply.

“I choose to hire”:

- Kids that care about success of the product and of the people around them...not just showing off their chops.
- People who are eager to learn best practices and be supportive of colleagues.
- People that don’t seek heroic, hot shot status. Ego and arrogance are major shortcomings.

Advice & Insight – Manager of Data Science – Marketing Software Company

Continued...

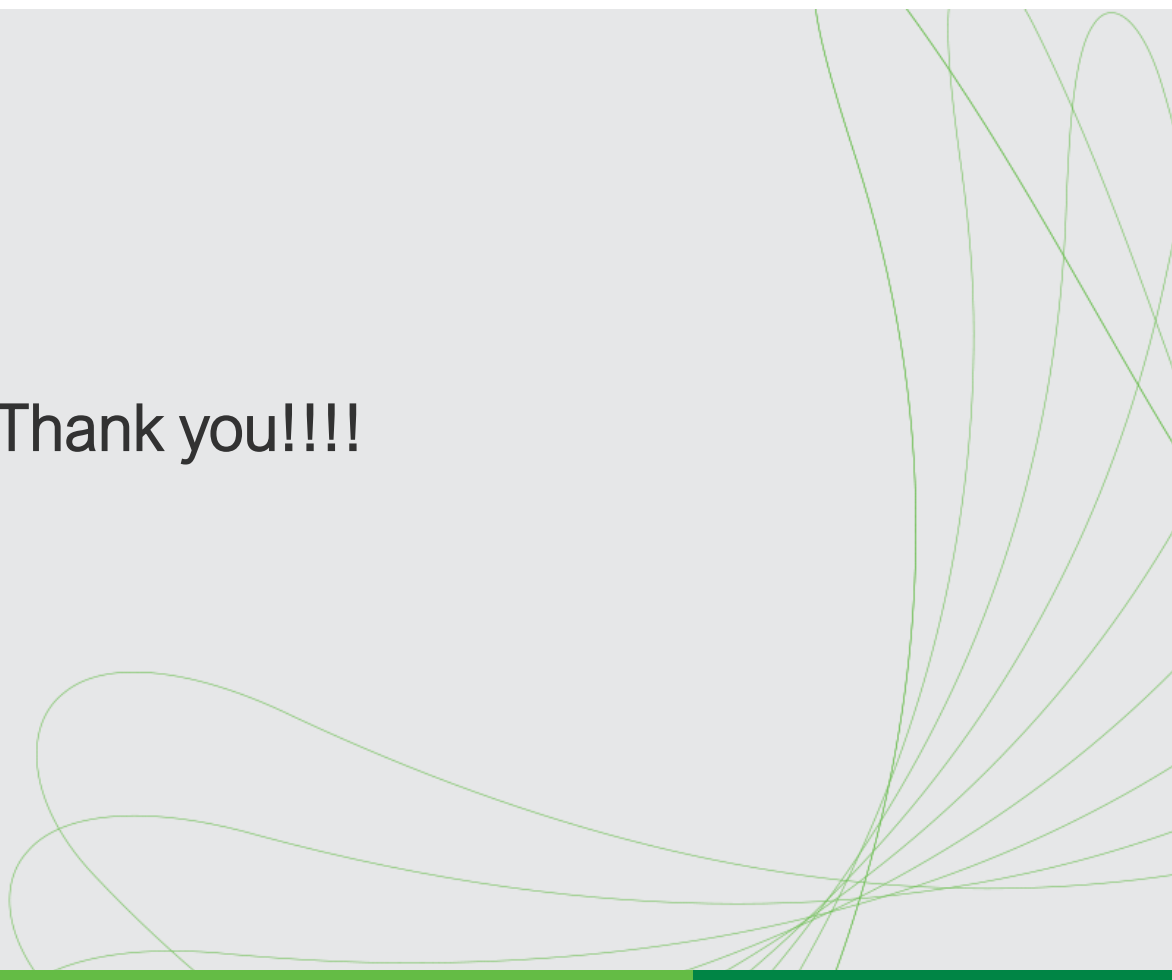
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Q&A

Thank you!!!!

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