Summary points from skills session

CRT Genomics Industry Day 1st June 2022

Hard skills

- Good understanding of Stats and Machine Learning, Bioinformatics pipelines, data visualization and conveying concepts/results
- Data engineering and programming
- Cloud computing
- Statistical modelling
- Agility across data domains
- Understand concepts of reference genomes, assemblies, and annotations
- Familiar with resources of data and know how to access (APIs, FTP sites)
- Artificial Intelligence - ML, NLP
- Blockchain technology - secure control of data
- Quality systems- understanding and applying knowledge of quality systems (quality management systems, GMP, ISO etc)
- Disease biology knowledge and extracting biological relevance from the data

Soft skills

- Leadership – project leadership, leading changes, reassuring stakeholders
- Team Player
- Collaborative mindset
- Interpersonal and people management skills- dealing with people, interacting with stakeholders
- Effective and direct communication
- Data storytelling
- Lateral thinking
- Ability to review and scrutinize own work/tasks/results and that of others
- Intellectual humility and transparency/honesty – admit mistakes and move on
- Project management
- Ownership of projects
- Willingness to travel and engage community
- Ability to listen
- Learn new things and broaden your mind (e.g sales language, project management, etc)
- Bring fresh perspectives and develop the ability to see new connections

What does my PhD give me that is of value to companies?

- Technical skills
- Understanding of reproducibility
- Coming up with concepts
- Endurance, finishing/completing a task and also knowing when its time to stop something
- Resilience
- Meeting deadlines
- Coping with situations
- Making a case /argument for something
- Communication and presentation skills

To be industry ready

Depends on the company but can include

- Understanding of quality standards and how it can affect your work, but this depends on the company and company culture
- Expertise around a disease area or biological process
- Cloud native

Other tips

Tailor your CV to the job description

Be clear in the interview what you are after e.g. is it important to you that you can publish or that you can work from home, or that you can/can't travel etc

Decide what you want to do and then map out path to get your there e.g., if you want to keep both academic and industry options open consider the fellowship track offered by some companies that would allow you to publish

There will be opportunities and challenges in managing, storing, and analysing big data and integrating it into the healthcare system.

Data Science positions have been very general until now but will become more specialized in the future, e.g., AI, ML, data architecture