

# The Vision of Clinical Data Science

Where will we be in 2025?

## Future Forum - Clinical Data Scientists for Tomorrow

11 October 2017



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## Process & People

- Who will be sitting in audience at PhUSE 2025?
- What will their core skillset be?
- How will it be different from today?
- What business areas will they be involved in?

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# Professional Development Project

## Process followed

- Reviewed the findings of Evaluation of Other Industries project group led by Sam Warden.
- Looked at Data Science in other industries such as:
  - Banking
  - Insurance
  - Google
  - Social media
  - Hotels.com
- Researched job descriptions

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# What skills do we think will be relevant

## - Interpersonal skills

- Present accessibly to non-technical audiences
- Transform analytical methodology / though processes into understandable terms for stakeholders.
- Presentation / client facing attributes.
- Work collaboratively cross-functionally
- Interact across different disciplines
- Natural curiosity and analytical thinking.
- Creative with data, including presenting, and analysing.
- Agility of thinking.
- Problem solving, team players, persistent attitude, tenacity.
- Flexible approach to new tasks, ability to ask for help.
- Foundation of analytical skills and a drive to continue learning.
- Assist stakeholders in identifying the question to be answered.

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# What skills do we think will be relevant

## – Technical skills

- Mathematics, Statistics, signal processing, image analysis
- Scripting and analytics software
- Big data management tools
- Statistical tools including Machine Learning toolkits
- Major programming frameworks
- Deep Learning and Natural Language Processing
- Understanding of Biology, Chemistry, and Drug Discovery
- Application of principles, concepts and standards as per industry practices.
- Handling a wide variety of data sources
- Visualization tools

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# What skills do we think will be relevant

## – Background

- Background in a discipline within the clinical industry
  - Scientific
  - Analytical
  - Statistical
  - Computer Science
- First-hand experience within the area of Data Science for the Pharmaceutical Industry
- Degree in Life Science, Mathematics, Statistics or Computer Sciences or other industry relevant area



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# People & Process Projects

Evaluation of Data Processes in other industries

- White paper out soon for public review – please comment

Professional Development

- White paper out soon for public review – please comment

New projects kicking off in 2018 – we are looking for volunteers and leaders



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# Acknowledgements

## Working Group Members

- Lynn Clipstone
- Diana Stuart
- Kath Wright
- Beate Hientzsch
- Abraham Yeh
- Holger Langkabel
- Paul McCaffery