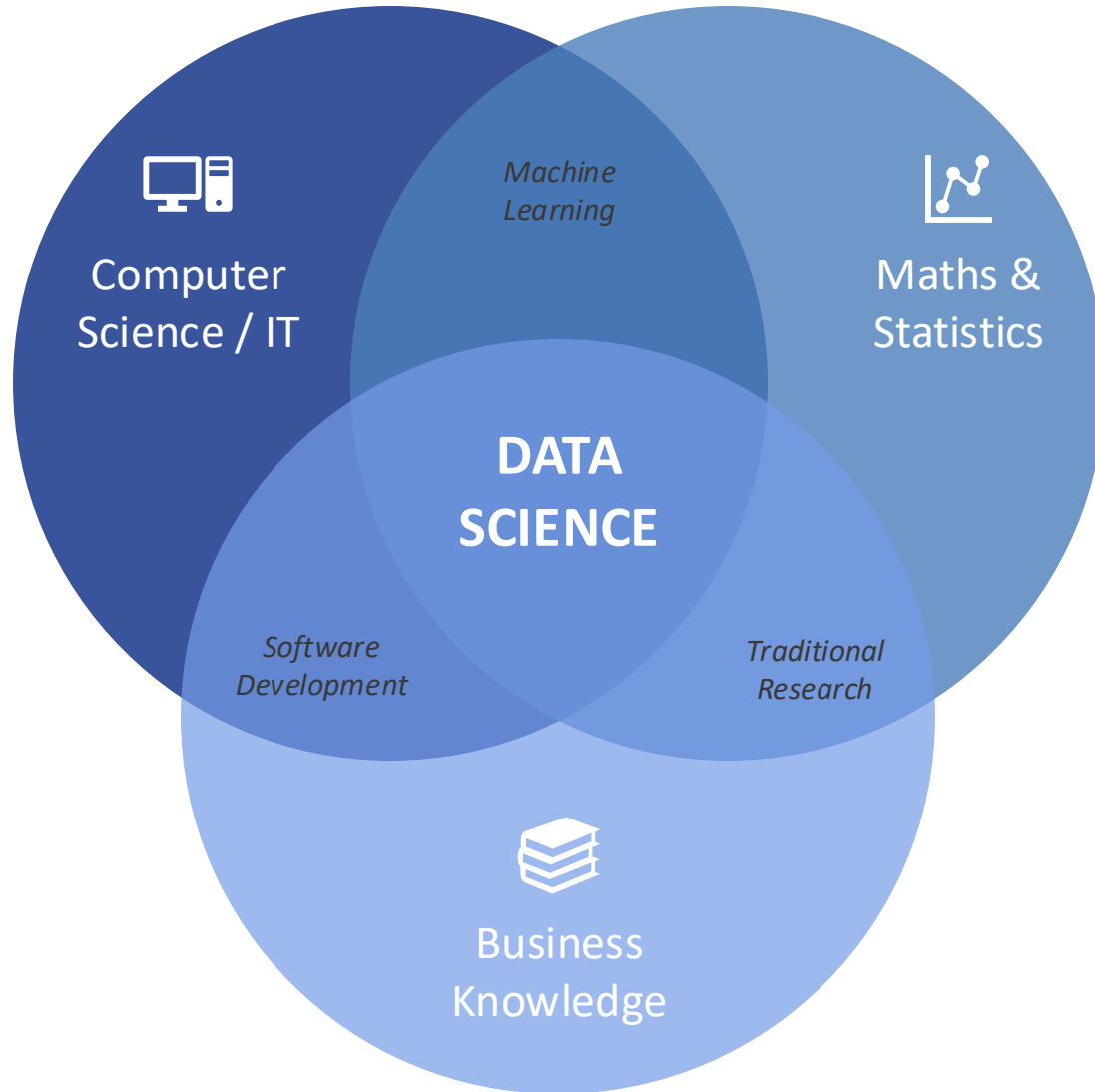


ANALYTICAL & MODELLING WORK - DATA SCIENCE

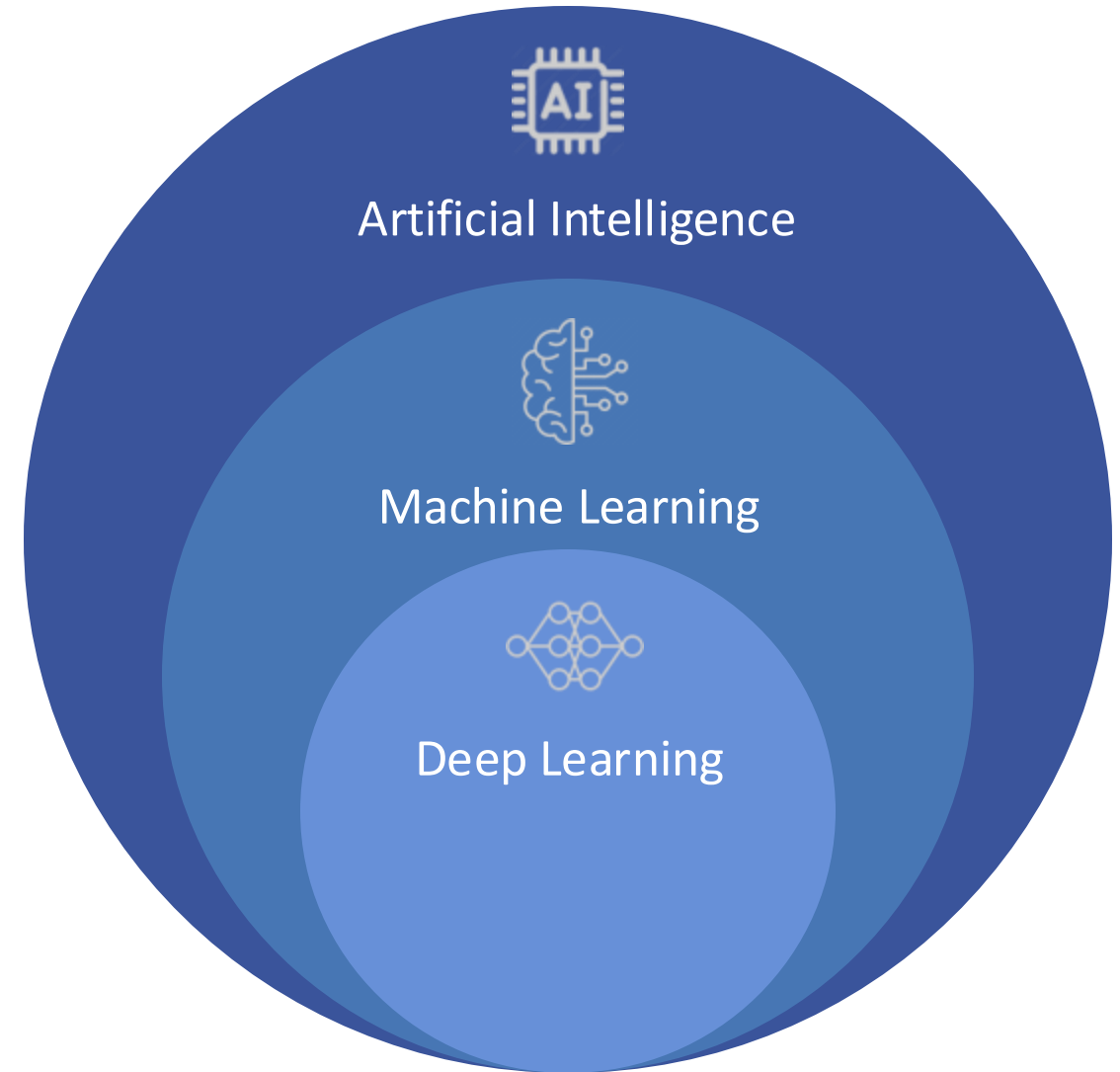
WHAT IS DATA SCIENCE?



Data Science is an interdisciplinary field that uses computer science, mathematics, and scientific processes to examine large amounts of data to uncover hidden patterns, generate insights, and help decision making.

WHAT IS AI?

Artificial Intelligence (AI)
is any technology that
imitates human
intelligence or performs
human tasks.



VISION STATEMENT

DATA SCIENCE

AI

To support high quality decision-making for clinical, operational, and strategic services by discovering and communicating the meaningful patterns in big data using data science techniques.



01

SCIENTIFIC

Work must be evidence based, with transparent and reproducible methods.

02

PROBLEM DRIVEN

Data science is useless if addressing the wrong question.

03

COLLABORATION

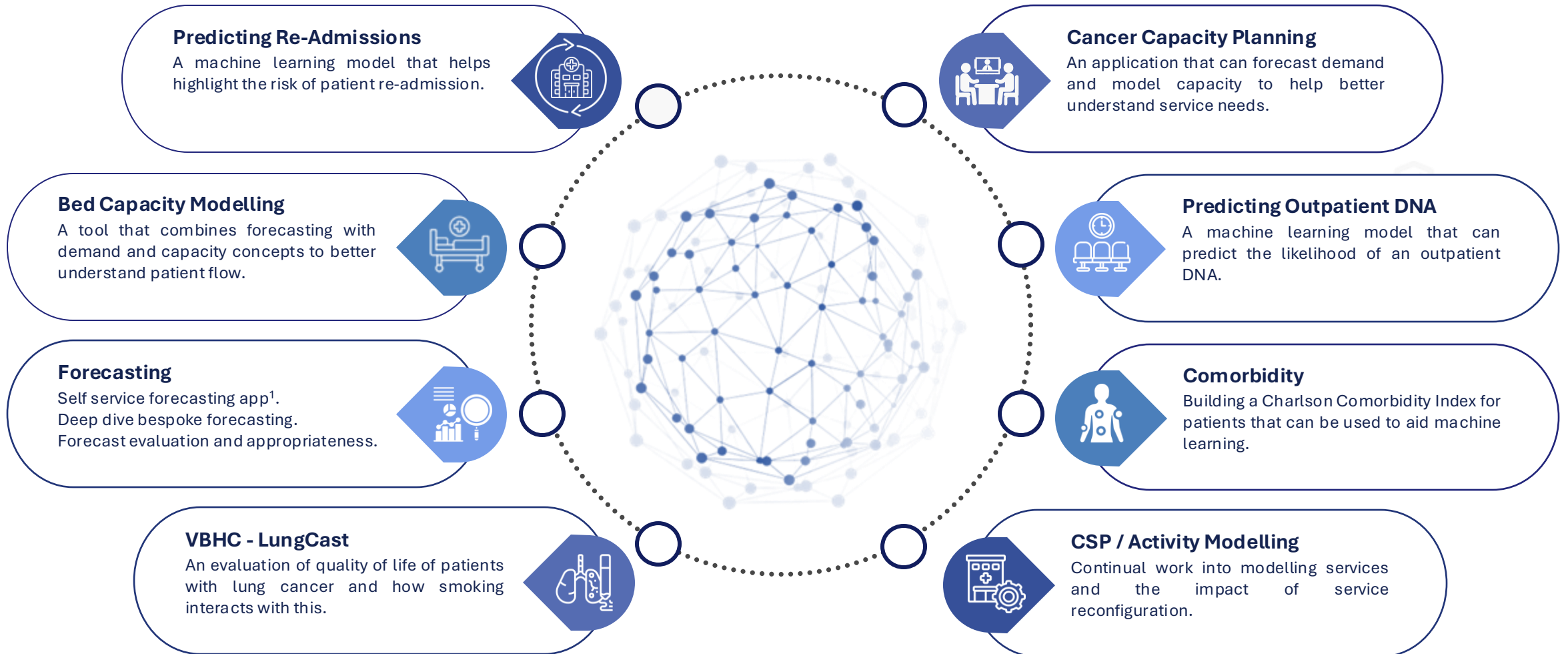
Data science will achieve little if the decision-making processes are not designed to embrace it.

04

COMMUNICATION

Complex ideas need to be explained simply. Simple ideas mustn't be over complicated.

EXAMPLES FROM DIGITAL SERVICES



UNIVERSITY PARTNERSHIPS



GIG
CYMRU
NHS
WALES

Bwrdd Iechyd Prifysgol
Hywel Dda
University Health Board



+



Swansea University
Prifysgol Abertawe

+



GIG
CYMRU
NHS
WALES

Bwrdd Iechyd Prifysgol
Hywel Dda
University Health Board

Joint Post

Hywel Dda and Aberystwyth University support a joint post in Health Data Science. This unique and innovative approach embeds cutting edge academic skills within the Health Board.

Dr Praboda Rajapaksha² has significant expertise in AI and Data Science and is currently developing a patient / digital twin framework for Hywel Dda. A first for NHS Wales.

PhD Student

Hywel Dda is sponsoring a PhD student in Swansea University via a partnership to enhance human interaction via data driven systems³.

Megan Morgan is building upon the forecasting work already in Hywel Dda. She is researching whether it is possible to predict the likely categories/presentations arriving at Emergency Department (ED).

Collaboration

Working with all the local universities has fostered many connections enabling the potential for mutual benefit.

Digital Service and the Data Science Team are recognised as being progressive and innovative in the field of data science and AI. Through these connections Hywel Dda is advancing AI through continued collaboration with universities.

REFERENCES



GIG
CYMRU
NHS
WALES

Bwrdd Iechyd Prifysgol
Hywel Dda
University Health Board

1. <https://7a201srvhat0006.cymru.nhs.uk/DataScience/>
2. <https://www.aber.ac.uk/en/cs/staff-profiles/listing/profile/prr16/#teaching>
3. <https://www.swansea.ac.uk/computational-foundry/epsrc-centre-for-doctoral-training/>

Recommendation:



GIG
CYMRU
NHS
WALES

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Hywel Dda
University Health Board

- The Committee is asked to **note** the update on the Analytical & Modelling Work - Data Science