COMP90089: Machine Learning Applications for Health
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Machine Learning in Health - Project Proposal

So far in this subject, you have been introduced to (i) the broad health informatics and digital health areas, (ii) the different health data sources and their idiosyncrasies, (iii) standard processes for preparing and cleaning health data (to generate research-ready data sets), (iv) the development of digital phenotypes and (v) you have gradually been introduced to different machine learning *flavours* and their respective applications in health.

In this group project, you will **design, implement, and evaluate a machine learning system** addressing a **relevant healthcare problem**.

The first deliverable of this project is a written **proposal**, which aims to (i) briefly define the health problem your group chose and demonstrate its significance, (ii) describe the data processing and digital phenotyping approaches you intend to follow and (iii) describe the machine learning and evaluation strategies you will implement, including metrics of success.

For this project proposal, we ask you to answer the questions below, in a succinct way. While your group has liberty to choose different data sources, MIMIC is the preferred option.

1. What is the clinical question/problem your group will tackle and why is it relevant? Please include information about the magnitude of the problem and make sure your claim is supported by references to the literature (up to 100 words).

2. Which data source(s)and information will you use? What is your plan for data processing and digital phenotyping? Remember for a digital phenotype it is important to list the criteria and describe which data elements will you use to find patients that meet those criteria (up to 200 words).

3. What is your machine learning approach (*flavour*),methodology, metrics of success and expected outcomes? (up to 300 words)

Upload a PDF document to Canvas where your group addresses the questions above. Clearly identify your group number and student names.