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# ECMM427 - Group Project Course work 1

## Project specification and plan

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### 1 Problem definition

Problem definition ::

1. As information in a domain increases, so does the complexity of the models used to model said domains.
2. Through the introduction other climate related components, large volumes of models are produced and they are increasingly more complex. The task of identifying which model best represents the present and future becomes more of a challenge.
3. Climate research is a vast field that is critical in predicting the violent hidden nature of weather systems, what environmental factors tend to increase this behaviour, and what we can expect from the natural world as we continue to inhabit and apply change to the world.
4. The met office produce hundreds of models every year that try and include new forms of statistical data with the intention of increasing our confidence in what the future holds.
5. These models are evaluated by a team of experts that look to see how well it predicts the known past with a hope in finding a model that shall predict the future of Earth's Climate.
6. These models however tend to have huge variance over their final outputs which highlights the fact the system is complex and hard to replicate.
7. Experts are looking to make use of machine learning techniques to help in the refinement of this process by replacing the cumbersome requirement for human time and discussion on what the merits of each model. The machine would help choose models by mimicking experts opinions.
8. Along with that, a easy to use web tool that facilitates the interaction between the experts and the machine such that they might get the most out of its operation.

### 2 Solution specification

#### 2.1 Web tool

1. Experts would like to be able to annotate their opinion on models.
2. Experts would like to upload models to be evaluated.
3. Evaluation should come with the functionality to toggle on and off other expert opinions.

#### 4. Personal expert dashboards and examination.