# Project Plan

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**Project title:** An analysis of machine learning and deep learning techniques for the detection of sarcasm in text

## I OUTLINE

### *A Project Aim*

Numerous studies have looked at machine learning, and more recently, deep learning techniques for sarcasm detection in text corpora. With applications in areas such as opinion mining and sentiment analysis, it has become a popular field of research. The aim of this project is to understand how various pre-processing, word-embedding and text classification techniques affect performance on this task, in order to produce a tool that can detect sarcasm with a *high degree* of accuracy.

### *B Preliminary Preparations*

- Collect and evaluate a selection of datasets
- Produce a literature survey documenting previous research in the domain of sarcasm detection and other text classification tasks
- Identify state-of-the-art (SOTA) techniques
- Gain a high-level overview of the following python libraries: scikit-learn, spaCy, PyTorch and TensorFlow (including the deep learning library Keras)

### *C Research Questions*

The research questions for this project are as follows:-

- Collect and evaluate a selection of datasets
- Produce a literature survey of research in the domain of NLP text classification
- A high-level overview of scikit-learn, spaCy, PyTorch and TensorFlow (including Keras)

## II DELIVERABLES

### *A Project Deliverables*

Table 1: List of Basic, Intermediate and Advanced deliverables

| **Deliverable** | **Description** |
|---|---|
| ***Basic*** | |
| Objective 1 | Description of objective 1 |
| Objective 2 | Description of objective 2 |
| ***Intermediate*** | |
| Objective 1 | Description of objective 1 |
| Objective 2 | Description of objective 2 |
| ***Advanced*** | |
| Objective 1 | Description of objective 1 |
| Objective 2 | Description of objective 2 |

### *B Project Schedule*

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