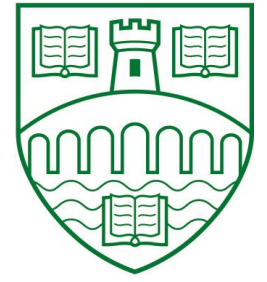# Machine Learning Analytics in Social and Health Care (Case Review)

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Project Overview

This project is to help create a proof of concept demonstrator for a Health and Social Care Case Review application. Solution involves using Big Data to gain greater insight and knowledge from the Case documents (unstructured data). This will help organizations to deliver:

- More efficient and effective case reviews
- Understand the cases and deliver more effective interventions.

Methodology (CRISP- DM)

1	2	3	4	5
Business Understanding	Data Understanding	Data Preparation	Topic Modeling	Evaluation of Model

Features

- ✓ CIN indicator Prediction
- ✓ Keyword Highlighting
- ✓ Automatic Summarization
- ✓ Document Clustering

Solution Overview

Using **Latent Dirichlet Allocation** topic modelling algorithm (Unsupervised Learning):

- ❖ Create a Corpus from (Case Documents and relevant docs)
- ❖ Build a dictionary from Corpus
- ❖ Train LDA topic model using the corpus and dictionary
- ❖ Refine model by modification hyper parameters (alpha & beta), topic number, stop words, dictionary filter etc
- ❖ Save model in Market Matrix(mm) format
- ❖ Load model into Django application and analyze case documents

VALANDA TECHNOLOGY · python · django · HTML5 CSS3

NALYTICS search rediscovered · gensim · D3 · NLTK