Project Topics

1. Comparison of graph embedding models.
2. Finding communities using graph cut model on a citation dataset (or another similar dataset)
3. Stock price forecasting using CNN
4. Image creation from numeracal data. Classifying extracted images using machine learning (or deep learning) methods.
5. Text style transfer
6. Context based sentiment analysis on a specific topic: I expect you to create a dataset on a spesific topic. Health, sports etc. You may choose the topic. And train a deep learning model to detect the sentiment.
7. Named entity recognition on health related text
8. Author prediction using deep learning models
9. Photo labelling using a deep learning model
10. Predicting cuisine name or type from recipe ingredients
11. Predicting characteristics of creams from ingredients. (deep learning)

Extra (if there is a very motivated student)

Evaluating deep learning learning strategies to identify marine organisms using full spectral flow cytometry: Flow cytometry is a fast and powerful optical technology for quantitative single cell analysis suited to all stages of biological research, medical science or drug development. The properties measured simultaneously include light scatter and fluorescence intensity. Full spectral flow cytometry enables the characterisation of fluorescent light across the whole spectrum. We will use this technology to collect autofluorescence data patterns of single cell marine organisms. Evaluating these datasets using machine learning algorithms would help with the fast classification and characterisation of marine samples. The aim of this study is to develop a script based on supervised machine learning that can classify specific light signal patterns in a range of single cell marine species.

I expect students to create a report related to the project they want to choose!!!