

Below are some ideas for potential NLP-based projects that might help you and your team brainstorm on what you would want to work on for the term project:

Text Classification

- Spam filtering
 - Classify emails as spam/not spam
 - Example dataset: [Trec spam dataset](#), [Spambase](#) etc.
- De-anonymization
 - Classify the text of an e-mail message to decide who sent it?
 - Datasets include [150,000 Enron emails](#) among others
- Autonomous Tagging of StackOverflow Questions
 - Make a multi-label classification system that automatically assigns tags for questions posted on a forum such as StackOverflow or Quora.
 - Dataset: [StackLite](#) or [10% sample](#)
- Keyword/Concept identification
 - Identify keywords from millions of questions
 - Dataset: [StackOverflow question samples by Facebook](#)
- Topic identification
 - Multi-label classification of printed media articles to topics
 - Dataset: [Greek Media monitoring multi-label classification](#)

Text Summarization

- Automatically create a summary with the major points of the original document?
 - Abstractive (write your own summary) and Extractive (select pieces of text from original) are two popular approaches
 - Dataset: [CNN and DailyMail News Pieces](#) by Google DeepMind

Sentiment Analysis

- Generic Sentiment Analysis
 - Tweets sorted by geography and timestamp.
 - Dataset: [Tweets sentiment tagged by humans](#)
 - Movie reviews
 - Datasets such as [Movie Review Data](#) and others
 - Amazon product reviews
- Aspect-based sentiment analysis

Speech Recognition/Conversational AI

- Social Chat/Conversational Bots
 - Can you build a bot which talks to you just like people talk on social networking sites?
 - Reference: [Chat-bot architecture](#)
 - Dataset: [Reddit Dataset](#)
- Copy-cat Bot
 - Generate plausible new text which looks like some other text
 - Obama Speeches? For instance, you can create a bot which writes some [new speeches in Obama's style](#)
 - Trump Bot? Or a Twitter bot which mimics [@realDonaldTrump](#)

Language Understanding

- Automated essay grading
 - The purpose of this project is to implement and train machine learning algorithms to automatically assess and grade essay responses.
 - Dataset: [Essays with human graded scores](#)
- Sentence to Sentence semantic similarity
 - Can you identify question pairs that have the same intent or meaning?
 - Dataset: [Quora question pairs](#) with similar questions marked
- Fight online abuse
 - Can you confidently and accurately tell whether a particular comment is abusive?
 - Dataset: [Toxic comments on Kaggle](#)
- Open Domain question answering
 - Can you build a bot which answers questions according to the student's age or her curriculum?
 - [Facebook's FAIR](#) is built in a similar way for Wikipedia.
 - Dataset: [NCERT books](#) for K-12/school students in India, [NarrativeQA by Google DeepMind](#) and [SQuAD by Stanford](#)

Other ideas include:

- Recommender systems (based on user's social media profiles)
- Machine Translation

- **Speech Recognition**

References:

<https://github.com/NirantK/awesome-project-ideas#text>

[Machine Learning Mastery Blog](#)

[Word Embeddings vs. Words](#)