



## **Task Assignment: NLP AI Engineer**

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## Revision History

Version No.	Description of Changes	Date of Release	Prepared By
1.0	Initial release	20200116	• Sidik Soleman

## Background

Prosa is one of the leading artificial intelligence (AI) companies in Indonesia. One of its focuses is to provide solutions to problems related to natural language processing or NLP. To solve those problems, AI engineers in Prosa mostly use deep learning methods. Therefore, familiarity with some deep learning methods is important for AI engineers in Prosa.

The purpose of this assignment is to explore AI engineer candidates about :

1. Their familiarity with deep learning methods
2. Their thinking processes when solving an NLP problem
3. Their way of implementing solutions by means of their codes
4. Their analytical thinking when analyzing the AI models that they have developed by means of experiments.

Thus, considering the above objectives, **the performances of AI models, i.e their accuracy, will not be considered as an assessment component in this selection.**

## Instruction

Please, create an AI model that solves a problem described in the following section. The AI model must be based on deep learning methods. There is no restriction for the type of methods to be used. When implementing the AI model, Gitlab (gitlab.com) must be used. In case you do not have an account in it, please create one. For the demonstration, please create a function that loads your AI model and performs the task as well.

### Deliverables:

1. A link to your code in Gitlab
2. Your codes and the model compressed into a single file
3. Your experiment documentations

**Deadline:** 1 week after the distribution (the exact date will be mentioned in the email)

**Submission:** Please send the deliverables to the following email address:

sidik.soleman@prosa.ai (cc: hr@prosa.ai) with the subject: NLP\_AIENG\_YEAR\_<YOUR NAME>

If you have question regarding this assignment, you could send an email to this address:  
sidik.soleman@prosa.ai

## Problem

Understanding customer voices is very important for a company to improve the quality of products and services. One of the ways is by identifying the sentiments of customer voices.

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Thus, the company could know whether its products or services are viewed positively or negatively.

Motivated by the above background, Prosa.ai will create an API service for sentiment analysis. Thus, Prosa.ai must develop an AI model that predicts the sentiment of a text whether it is positive or negative. Because deep learning methods achieved better performance in general, Prosa.ai decided to develop the AI model by using one of deep learning methods.

For the model development, a dataset, which is about restaurant reviews, has been constructed. The dataset consists of training and test data, which is available at this link: <https://drive.google.com/file/d/1rfjmie2tTNwOkBmCaZ7phZiEWqLOxriB/view?usp=sharing>

The dataset file is protected by a password. To extract it, please input this password:  
@Prosa.4i