# **Executive Summary**

#### Introduction

Machine Learning is a method of data analysis which is to automate analytical model building. It is a category algorithm that can predict outcomes without being explicitly programmed. Machine learning algorithms may even be more efficient than a person on the same task. Even though a machine learning algorithm may not be perfect, a person can also make human error, which concludes that a machine learning doing some some errors might be acceptable when thinking about efficiency in time and resource.

## **Target Audience**

Using machine learning in a postal office may be very beneficial. It faster and less time consuming and does not require much resources as it exist API, libraries and data to implement such algorithm. The only time consuming is implementing the algorithm but will be rewarded.

## Risk/Opportunity

The risk with using machine learning is that it may do some errors, for example recognizing a digit wrong. This is also possible to do as a human. If the machine learning algorithm is well trained and even continuously training, the algorithm might never predict wrong.

Other opportunities that comes with such algorithm is it possible to extend it to do some other task, e.g., recognizing name and address. If the postal office has such database, the algorithm can recognize name and address, lookup in the database and forward the post/package more easily.

### Conclusion

Use of machine learning algorithm is beneficial for time and resource, because can perform much faster than a human would to on a task, in this case recognizing handwritten digits. It might make some mistakes, but if it learns from it mistakes, it can perform even better next time. The system can also be extended to do some other task that is suitable for machine learning, e.g., name and address lookup.