## **Abstract**

Nowadays, email is the way to send the message with low cost, easy and fast characteristic. Now there are many peoples unappropriate use to send unsolicited messages. These messages are called spam email. Because of this, spam waste much user's time and money. Therefore, users need to develop spam filtering that can decide and distinguish spam or non-spam in users' inbox.

In this final task, developed a spam filtering system to identify the messages wheter they are spam or non-spam by using Artificial Neural Networks (ANN). An optimum ANN can optimally classify the emails. By using Evolutionary Programming (EP) can be obtained ANN with optimal structure and weight.

The used data is emails data from ECML PKDD 2006 Discovery Challenge with email has been encoded as bag-of-word vector space so we don't know the content of that email.

The highest AUC value of the experiment is 0.767853.

**Keyword**: spam filtering, Artificial Neural Networks, Evolutionary Programming, classification.