

# 1 Introduction

Encryption is a powerful tool to protect your information, but standard encryption can be insecure if found. Additionally, it can be incriminating if found, so that is why hiding the encrypted information is more important then ever. This practice is called steganography, and I have developed such a system to encrypt a text document, and hide it inside of an image, this document describes in detail the processed used to encrypt and hide the information inside of a photograph.

## 2 Encryption

The encryption used in this system is a simple XOR rotate cipher. The cipher uses an n-byte key to encrypt the message, and throughtout the encryption of the message the key changes. The changes in the key over the process of encryption can be described by the equation below.