# Stenography GAN: Cracking Stenography with Cycle Generative Adversarial Networks

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Abstract—This document is a model and instructions for  $ext{ET}_{E}X$ . This and the IEEEtran.cls file define the components of your paper [title, text, heads, etc.]. \*CRITICAL: Do Not Use Symbols, Special Characters, Footnotes, or Math in Paper Title or Abstract.

Index Terms—component, formatting, style, styling, insert

## I. INTRODUCTION

Talk about the importance of cyrpto.

The sten specifically.

Sten used in real life.

There have crack to crack cyrpto and steno.

We are also taking on the same task. Our approach is cycle gans.

Before that, we need to about gans in general.

History of cycle gans

Pix2Pix and CNN

Why will this work/or why is this worth exploring

In order to understand its need to compare it to other models, and in this case autoencoders

For maximum accruacy we also introduced. Bayesian optimization which is ...

Start typing here [1].

# II. BACKGROUND

The details of the sten algo. Include some images. Give an example.

We used cycles gans to crack this algo. That etails:

Regular GANs. Include images and the math

Cycle GANs. Explain it a little bit

Our implemention of cycle gans ultalizes pix2pix

Explain what pix2pix is. Include images and rough outlay of the math

Pix2pix emplyed CNN. What they are and the math behind it.

CipherGANs. Explain it a little bit Autoencoders. Explain it a little bit Baysian optimzation. Explain it a little but

#### III. METHODS

Math for the cycle gans

Math behind the autoencoders

Math bethind the bayes opt

Training CycleGAN: The training and testing data How we actually flow through the network Bayes opt

Training Autoencoders: The training and testing data How we actually flow through the network

Testing protocols: Testing

Different training techniques: Bit size

# IV. RESULTS

Here are the result for cycle gan: Grab images from the cycle gan algo

Here are the results for autoencoder: Grab images from the autoencoder section

Here are the results for messing with different bit size: Images from bit = 7, 6, 5, 4, 3

Here are the results for cycle gan with bayes opt:

## V. DISCUSSION

Summary of the introduction

If our model was successful. Why was it not successful.

Extra things that we can work on.

Our model presentes many fruitful avenues of research

# REFERENCES

[1] L. D. Trang and Z. Mebkhout, "Variétés caractéristiques et variétés polaires," C. R. Acad. Sc. Paris, vol. 296, pp. 129–132, 1983.