Notes:

Yellow means I want to reword/rework it

There on comments on this page as well highlighting some of my main thoughts

Title

Abstract

[Todo: Abstract]

# Introduction

## What is Machine Learning

In the modern era of data, individuals are generating and collecting vast amounts of information that can be difficult to manage, comprehend and utilize effectively. To make sense of this data , The field of computer science and artificial intelligence has introduced a sophisticated tools: Machine Learning. Machine Learning (ML) was created to help process these large amounts of data, many of which are too vast for human [processing ?]. This is made possible by the ability of machine learning algorithms to automatically learn from data, identify patterns, and make predictions “without being explicitly programmed ([MIT](#_https://mitsloan.mit.edu/ideas-made)).” In other words, instead of being given specific instructions for what to do with the data, machine learning algorithms are designed to learn from patterns in the data itself. When these machines have large datasets to analyze, these algorithms can identify underlying patterns and make decisions based on new, unseen data.

## Machine Learning in Cyber Security

This ability to learn and adapt to new data makes ML particularly versatile and ideal for a wide array of situations, especially pertaining to Cyber Security. [include history here?]. Due to the ever-changing nature of Cyber Threats, it can be difficult for traditional security solutions to keep up. However, by implementing ML measures such as anomaly detection, behavioral analytics, and spam/phishing detection, detect and respond to cyber threats more efficiently.

[todo]

[segue to spam detection here]

# Related Work

[todo]

# Methods

[todo]

# Results

[todo]

# Conclusion

[todo]

# Resources

## MIT

* + <https://mitsloan.mit.edu/ideas-made-to-matter/machine-learning-explained#:~:text=Machine%20learning%20is%20a%20subfield,learn%20without%20explicitly%20being%20programmed>
  + Note: was actually quoted in 1950s by AI pioneer [Arthur Samuel](https://en.wikipedia.org/wiki/Arthur_Samuel) – see if a og source is available

## A

* a

## A

* a

## A

* a

## A

* a