#### Universität des Saarlandes MI Fakultät für Mathematik und Informatik Department of Computer Science

#### Bachelor's Thesis

#### Link Stealing Attacks on Inductive Trained Graph Neural Networks

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Reviewers asdf asdf

#### Abstract

### Acknowledgment

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# Introduction

# Technical Background

- 2.1 Neural Networks
- 2.2 Graphs

## Graph Neural Networks

- 3.1 Transductive Learning
- 3.2 Inductive Learning
- 3.3 GraphSAGE
- 3.4 Graph Attention Network
- 3.5 Graph Convolution Networks

# Privacy Issues on GNNs

4.1 Link Stealing Attack

# Experiment

- 5.1 Setup
- 5.1.1 Target Models
- 5.1.2 Attacker Model
- 5.2 Datasets
- 5.2.1 Attacker Sampled Dataset
- 5.3 Attacks
- 5.3.1 Attack 1

Description

5.3.2 Attack 2

Description

5.4 Evaluation

# Conclusion

- 6.1 Consequences in Machine Learning
- 6.2 Consequences in Society