

# Bachelor's Thesis

Title: Can Public Displays Increase Social Engineering Awareness?

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## Motivation:

Raising employees' awareness of information security hazards is a regular point on the agenda of many companies, yet the average cost of phishing attacks alone amounted to \$4.65 million in 2021 (across 17 countries) [1]. Even large tech companies such as Facebook and Google fall victim to these attacks [2]. Despite of information technology (IT) security awareness campaigns, unknowledgeable or careless personnel is the second most frequent cause of serious security breaches, according to Kaspersky [3], the first one being malware.

In this thesis, an attempt will be made to facilitate conversations about security and social engineering in day-to-day work and to increase the attention of employees. For this task, the use of a publicly accessible and visible display to share social engineering attempts encountered by employees shall be evaluated. The idea is that through more engagement with the issue, mindfulness and awareness may be raised and the number of successful social engineering attacks reduced.

Sharing spaces in the form of displays have previously been used to encourage conversation in the workplace, for example by displaying pictures about a topic which a person close to the display is interested in [4] or by gathering social media content [5] about people nearby. It stands to reason, that such a solution might increase awareness of IT security and in turn decrease susceptibility to social engineering attacks.

## Tasks:

Existing literature will be reviewed to find a suitable design for the display. In a design phase, collected ideas shall be examined in order to find and create an original design, which has some scientific backup in terms of its effectiveness.

The next step is the implementation and the installation of the display. After some time, a study with the employees interacting with the display will be conducted. The results of the study shall be evaluated to determine the effects of the public display.

**Literature:**

- [1] IBM Corporation. 2021. Cost of a Data Breach Report 2021.  
<https://www.ibm.com/security/data-breach>
- [2] Jacey Fortin. 2019. Man pleads guilty to stealing \$100m from Google and Facebook by sending fake invoices. <https://www.independent.co.uk/news/world/americas/google-facebook-scam-fake-invoice-wire-fraud-guilty-a8840071.html>
- [3] Kaspersky. 2017. The Human Factor in IT Security: How Employees are Making Businesses Vulnerable from Within. <https://www.kaspersky.com/blog/the-human-factor-in-it-security/>
- [4] Joseph F. McCarthy. 2002. Using public displays to create conversation opportunities. In Proceedings of Workshop on Public, Community, and Situated Displays at CSCW'02. <https://interrelativity.com/joe/publications/PublicDisplaysForConversations-CSCW2002ws.pdf>
- [5] Joseph F. McCarthy, Ben Congleton and F. Maxwell Harper. Sharing Online Photos via Proactive Displays in the Physical Workplace.  
<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.579.2492&rep=rep1&type=pdf>