**Abstract**

Currently, phishing, spoofing, and fraudulent email attacks are so widespread that it is difficult to tell a spam message from a real or legitimate email. These attacks use emails in 96% of cases. The average annual global loss to individuals and businesses due to cybercrime is $1.5 trillion.

These attacks can target a specific person anywhere in the world or be carried out internally within a company. The weakest link among the possible victims is typically targeted by the attackers. In this research, we suggest a method for determining the relevance between two email users based on their correspondence. This relevancy, which we calculate using a variety of metrics, shows how likely it is for a person to be attacked by other users.

**Introduction**

The individuals or organizations face an average of [1] global losses to cybercrime total $1.5 trillion per year, which amounts to $2.9 million per minute, a new report by RiskIQ shows. Some of the largest companies are losing $25 each minute due to security breaches. Phishing campaigns accounts for losses of $17,700 per minute and ransomware attacks are expected to cost the world $22,184 per minute this year.

In this study, email connections are used to assess how relevant an email from an unidentified sender may be to a user. The links can simply be followed using graphs or networks. For data representation, graphs or networks can be utilized in various applications, such as social media networks [2]. (Social Media Graphs can feature a social network from Facebook, LinkedIn, or Instagram and communicate through messages, posts, tags, and other means.) Phone Networks [3] (Phone networks encompass the group of people with whom they communicate via calls, SMS, and other messaging services), Email networks [4]) (Email networks include the personal and professional contacts they are linked to via email; information in email networks includes their location, organizations, shared documents, links, and other details.)

**References**

[1] <https://blog.knowbe4.com/this-year-phishing-causes-losses-of-17700-per-minute-and-ransomware-attacks-will-cost-22184-per-minute>

[2] <https://stratcomcoe.org/cuploads/pfiles/social_media_monitoring_a_primer_12-02-2020.pdf>

[3]<https://www.researchgate.net/publication/267399256_Mapping_Mobile_Phone_Network_onto_Urban_Traffic_Network>

[4] <https://www.researchgate.net/publication/221536203_Visualization_and_Analysis_of_Email_Networks>