**A picture containing shirt

Description automatically generated**

**RESEARCH METHODS (CIS4011-N)**

**Research Methods Draft Literature Review**

**By**

**KRISHNA VAMSI KODATI**

**(W9324537)**

Contents

1) [Introduction: 3](#_Toc39079436)

2) [Database Search: 3](#_Toc39079437)

[i) ACM Database search: 3](#_Toc39079438)

[ii) IEEE Database search: 5](#_Toc39079439)

[iii) Scopus Database search: 6](#_Toc39079440)

3) [Inclusion and Exclusion Process: 7](#_Toc39079441)

4) [Conclusion and Limitations: 14](#_Toc39079442)

5) [References: 14](#_Toc39079443)

**Topic: Privacy and Security of online data in social networks.**

# Introduction:

Currently people are more dependent to the data more than ever. Previously there are several physical storage devices to store our data which is secure compared to the data which is online may vulnerable to attacks. Recently, the OSN (Online Social Networks) has a huge impact on your daily life. We share our personal information, pictures, places we went, things we are interested in, to the social media, which may not be secure, and we have no idea about how secure it is.

The information of users data in online social media profiles, might be misused by attackers by creating cloned profiles. The social media networks have a leverage to the contacts, location, and even business activities which are related to the user. Therefore, the information will be used to implement targeted advertising for a specific user.

Some online social networks states that they do not share our personal details to anyone, which may not be true, that results in insecurity of our data and there are numerous incidents of loss of user’s privacy especially in the social networks area. To prevent these social media breaches the social networking sites must improve their privacy and security measures.

# Database Search:

These are the Databases searched regarding the topic:

i) ACM Database ii) IEEE Database and iii) Scopus Database.

### i) ACM Database search:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Search Question** | **Keywords** | **Filter** | **Result** | **Evaluation** |
| What publications that had published on “Privacy and Security of online data in social networking”? | [All: privacy and security] AND [All: online] AND [All: social networking] | None | 34,767 | Plethora of research papers to “Privacy and Security of online social networking”. The keywords searched under all attributes. |
| Privacy and Security of online data in social networking | [All: privacy and security] AND [All: online] AND [All: social networking] | Publication Date: 2010-2020 | 25,051 | Confined the search to the last 10 years.  Nothing much changed in the search results. Too many of them. |
| Privacy and Security of online data in social networking | [Publication Title: privacy and security] AND [All: online] AND [All: social networking] | Publication Date: 2010-2020 | 4,413 | Some related to the subject. Furthermore, narrowing the search. Searching the keywords under the Publication Title. |
| Privacy and Security of online data in social networking | [Publication Title: privacy and security] AND [Publication Title: online] AND [All: social networking] | Publication Date: 2010-2020 | 209 | The results are good, and many are related to the topic. Changing the keywords i.e. searching the papers based on the title of the publications. |
| Privacy and Security of online data in social networking | [Publication Title: privacy and security] AND [Publication Title: online] AND [Publication title: social networking] | Publication Date: 2010-2020 | 104 | The results are better compared to previous search. Trying to search under the particular Proceedings Series. To get the relevant results. |
| Privacy and Security of online data in social networking | [Publication Title: privacy and security] AND [Publication Title: online] AND [Publication title: social networking] | Publication Date: 2010-2020  Proceedings Series: PSOSM: Privacy and Security in Online Social Media | 8 | Each and every publication is appropriate to the research topic. |

### ii) IEEE Database search:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Search Question** | **Keywords** | **Filters** | **Results** | **Evaluation** |
| What publications that had  published on “Privacy and Security of online data in Social Networking”? | (((“All Metadata”: privacy and security) AND “All Metadata”: online data) AND “All Metadata”: social networking) | None | 1,291 | Plenty of results, search should be refined. |
| Privacy and Security of online data in Social Networking | (((“All Metadata”: privacy and security) AND “All Metadata”: online data) AND “All Metadata”: social networking) | Publication Year: 2010-2020 | 1,243 | Confined the search to the last 10 years.  Nothing much changed in the search results. Too many of them. |
| Privacy and Security of online data in Social Networking | (((“Document Title”: privacy and security) AND “All Metadata”: online data) AND “All Metadata”: social networking) | Publication Year: 2010-2020 | 41 | Keywords are changed to search the papers under Document title. More refined search and most publications are related to the topic. |
| Privacy and Security of online data in Social Networking | (((“All Metadata”: privacy and security) AND “Document Title”: online data) AND “Document Title”: social networking) | Publication Year: 2010-2020 | 11 | Keywords searched under the title of the document. Then Every publication is relevant to the research topic. |

### iii) Scopus Database search:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Search Question** | **Keyword** | **Filter** | **Result** | **Evaluation** |
| What publications that had  published on “Privacy and Security of online data in Social Networking”? | All (privacy and security AND online Data AND Social media) | None | 17,130 | Many publications are resulted and the search to be refined. |
| Privacy and Security of online data in Social Networking | All (privacy and security AND online Data AND Social media) | Subject Area: Computer Science | 10,913 | Confined to specific Subject area as Computer Science. Some useful publications and the search should be further refined. |
| Privacy and Security of online data in Social Networking | (Title key: privacy and security) AND (Title key: online data)  AND (Title key: Social Networking) | Subject Area: Computer Science | 1,041 | Results are better when the keywords are limited to the Publication title. |
| Privacy and Security of online data in Social Networking | (Title key: privacy and security) AND (Title key: online data)  AND (Title key: Social Networking) | Subject Area: Computer Science  Publication Year:2015-2020 | 566 | Confined to the Publication Years to the last five years. Some better results compared to previous search. |
| Privacy and Security of online data in Social Networking | (Title key: privacy and security) AND (Title key: online data)  AND (Title key: Social Networking) | Subject Area: Computer Science  Publication Year:2020  Document type: Conference Paper | 8 | Keywords searched under the title of the document. These results are the most relevant to the research topic. |

# Inclusion and Exclusion Process:

|  |  |  |  |
| --- | --- | --- | --- |
| **Sno** | **Research Paper Title** | **Include/Excluded** | **Reason** |
| 1 | Online social network platforms: toward a model-backed security evaluation. | **Tick** | This paper is related to the topic and it contains Stripped Down approach for data abstraction which supported by the OSN platforms and also an abstraction model aiming for the systematic evaluation of the OSN security |
| 2 | Collaborative privacy management for third-party applications in online social networks. | **Tick** | This paper provides about the privacy control mechanism for OSN which share the users data to Third-Party Applications (TPA). It also proposes an approach which makes requests to the users personal data by the TPA’s to explicit and enables all users to gain access and control over their data which is used by TPA’s. It also preforms questionnaires to understand users privacy attitudes towards TPA’s. |
| 3 | {Privacy, privacidad, Приватност} policies in social media: providing translated privacy notice. | **Close** | This paper is not related to the topic. It contains about the language translation of the Privacy information in OSN that helps the users to understand about the Privacy and Security statements which is in different language. |
| 4 | Privacy attacks in social media using photo tagging networks: a case study with Facebook. | **Tick** | This paper is a bit relevant to the topic. It contains the quantitative demonstration of how tagging pictures in OSN would expose personal user information that are subtle and also it has an analysis that help users to be aware of breach of their private data and introducing the new design of privacy-preserving ways of tagging pictures on OSN. |
| 5 | Leveraging trust and distrust for sybil-tolerant voting in online social media. | **Close** | This paper is not relevant to the topic. It discusses about the open membership access of voting on OSN which leads to the Sybil attacks by Malicious attackers. |
| 6 | Answering vertex aggregate queries using anonymized social network data. | **Close** | This paper is irrelevant to the topic. It discusses about the vertex aggregate queries and degree attacks in OSN |
| 7 | Credibility ranking of tweets during high impact events. | **Close** | This paper is not relevant to the topic. It contains about the finding of the spam/false tweets about all the events in 2011. |
| 8 | The Anti-Data-Mining (ADM) Framework - Better Privacy on Online Social Networks and Beyond. | **Tick** | This paper is related to the topic. In this paper they introduced a Framework called ADM (Anti-Data Mining) framework this is based to the suppression of personal information that includes the user personal photos, details and video contents. And also, they used social-bots in a novel way for protecting the personal information which is shared by the user. |
| 9 | A Data-Reachability Model for Elucidating Privacy and Security Risks Related to the Use of Online Social Networks. | **Tick** | This paper is related to the topic. It introduces Data-Reachability model helps the user to identify any leakage in their private data which is shared in OSN to the malicious parties. |
| 10 | Towards trusted data management in online social network (OSN) services. | **Tick** | This paper is related to the research topic. It contains about the data transparency, the OSN should allow users to control their data which is shared among the Third-Party applications (TPA.) |
| 11 | Data security approach for online social network. | **Tick** | This paper is relevant to the research topic. It contains a data security approach for OSN. And also, an awareness to the user to have some more tools to allow them to control over their personal data. |
| 12 | Data isolation and protection in online social networks. | **Close** | This paper is not related to the topic. It contains about DPIS algorithm which helps the admin to decide the profile a user is fake or not by asking the users ID as the verification. |
| 13 | Preserving Relation Privacy in Online Social Network Data. | **Close** | This paper is not related to the research topic. It only contains the breach of users relationship status in the OSN. |
| 14 | Optimal State Management of Data Sharing in Online Social Network (OSN) Services. | **Tick** | This paper is related to the topic. It contains about the users in OSN should have control over his/her data to be shared with other users/Third-Party Applications. It also helps the user to decide how much information they should reveal to others by an approach called Markov Decision Process (MDP) |
| 15 | A system learning of connection with humans by online social networking — A rapport by means of creating usable customer intelligence from social media data: Clustering the social communities. | **Close** | This is not related to the research topic. It inscribes the value of OSN and the users relationships between the online websites. |
| 16 | A game theoretic approach for modelling optimal data sharing on Online Social Networks. | **Tick** | This paper is related to the research topic. It contains about the optimal data sharing i.e. a user is allowed to control his/her data which is shared among other parties. It describes about an approach to the OSN users to determine their level of controlling their data. |
| 17 | Data availability improvement in peer-to-peer online social networks. | **Tick** | This paper is related to the research topic. It contains about the users should have control over the data that is share among other users by introducing peer-to-peer social networks |
| 18 | Advantages of Having Users' Trust and Reputation Values on Data Sharing Process in Online Social Networks\*. | **Close** | This is not related to the topic. It contains about the copyrights issues of data which is shared among the users. |
| 19 | Managing Multimedia Big Data: Security and Privacy Perspective. | **Close** | This irrelevant to the topic. It contains about the current issues in Managing Multimedia Big Data. |
| 20 | Secure Request Response (SRR): A Framework to Classify Trust/Distrust Relationships in Social Networking. | **Tick** | This paper is related to the research topic. It contains a Secure request Response framework, that helps the user to prevent from malicious attacks and personal data leakage. |
| 21 | Social Network Analysis and Mining: Privacy and Security on Twitter. | **Close** | This paper is not related to the topic. It contains about analysing the privacy and security of tweets. |
| 22 | Shaping digital identities in social networks: Data elements and the role of privacy concerns. | **Close** | This paper is not related to the topic. It contains the survey research about shaping digital identities. |
| 23 | Threats Against Information Privacy and Security in Social Networks: A Review. | **Tick** | A bit related to the research topic. It contains about the identity thefts and threats of fake accounts which are specifically discussed relating to OSN |
| 24 | Architectural Considerations for Building a Robust Crowdsourced Disaster Relief Application. | **Close** | This paper is not related to the topic. It contains about a disaster relief application. |
| 25 | Follow your silhouette: Identifying the social account of website visitors through user-blocking side channel. | **Close** | This paper is not related to the topic. |
| 26 | The Politics of Artificial Intelligence Behaviour and Human Rights Violation Issues in the 2016 US Presidential Elections: An Appraisal. | **Close** | This paper is irrelevant to the topic. |

Total Included: 12

Total excluded: 14

# Conclusion and Limitations:

Throughout the research, it had been tough to limit the search to the relevant good papers because of the broad research topic. Many of the search results are not related to the research topic.

Altogether the research topic aid me to improvise my ideas regarding the research topic. Initially, this research aim is about the Data Transparency i.e. users should have control over their shared data. However, some relevant papers helped to know about some frameworks such as Secure Request Response (SRR) (Mr, N. and Harini, N., 2020) and The Anti-Data-Mining (ADM) (Mahmood, S., 2019) that aims to secure the data users in OSN.

From the above Databases used for Literature search IEEE provided more efficient search results compared to ACM and SCOPUS. SCOPUS Database which had provide large number of irrelevant search results.

In conclusion, this Literature search process had produced good papers and articles for the project proposal. With the help of collected data it could be used in the methodology of the project proposal.

# References:

Erwan, L. et al. (2012) ‘Online social network platforms: toward a model-backed security evaluation’. *In Proceedings of the 1st Workshop on Privacy and Security in Online Social Media (PSOSM ’12).*, pp. 1–7.

Pauline, A. et al. (2012) ‘Collaborative privacy management for third-party applications in online social networks’. *In Proceedings of the 1st Workshop on Privacy and Security in Online Social Media (PSOSM ’12)*., pp. 1–4.

Blasé, U., Manya, S. and Lorrie Faith, C. (2012) ‘{Privacy, privacidad, Приватност} policies in social media: providing translated privacy notice’*. In Proceedings of the 1st Workshop on Privacy and Security in Online Social Media (PSOSM ’12).*, pp. 1–4

João Paulo, P. et al. (2012) ‘Privacy attacks in social media using photo tagging networks: a case study with Facebook’. *In Proceedings of the 1st Workshop on Privacy and Security in Online Social Media (PSOSM ’12).*, pp. 1–8.

Nitin, C. et al. (2012) ‘Leveraging trust and distrust for sybil-tolerant voting in online social media’. *In Proceedings of the 1st Workshop on Privacy and Security in Online Social Media (PSOSM ’12).*, pp. 1–8.

Bin, Z. (2012) ‘Answering vertex aggregate queries using anonymized social network data’. *In Proceedings of the 1st Workshop on Privacy and Security in Online Social Media (PSOSM ’12).*, pp. 1–4.

Aditi, G. and Ponnurangam, K. (2012) ‘Credibility ranking of tweets during high impact events’. *In Proceedings of the 1st Workshop on Privacy and Security in Online Social Media (PSOSM ’12).*, pp. 2–8.

Mahmood, S. (2019) ‘The Anti-Data-Mining (ADM) Framework - Better Privacy on Online Social Networks and Beyond’, *2019 IEEE International Conference on Big Data (Big Data).*, pp. 5780-5788.

Creese, S. et al. (2012) ‘A Data-Reachability Model for Elucidating Privacy and Security Risks Related to the Use of Online Social Networks’, *2012 IEEE 11th International Conference on Trust, Security and Privacy in Computing and Communications*., pp. 1124-1131.

Park, J. S. et al. (2012) ‘Towards trusted data management in online social network (OSN) services’, *World Congress on Internet Security (WorldCIS-2012)*., pp. 202-203.

Bachpalle, S. D. and Desai, M. (2014) ‘Data security approach for online social network’, *Second International Conference on Current Trends in Engineering and Technology - ICCTET 2014*., pp. 262-267.

Sureshkumar, A., Palanisamy, S. and Sowdeshwari Sowmiya, R. A. (2013) ‘Data isolation and protection in online social networks’, *2013 International Conference on Information Communication and Embedded Systems (ICICES).,* pp. 150-155.

Li, N., Zhang, N. and Das, S. (2011) ‘Preserving Relation Privacy in Online Social Network Data’, *in IEEE Internet Computing*, vol. 15, no. 3, pp. 35-42.

Park, J. S. et al. (2012) ‘Optimal State Management of Data Sharing in Online Social Network (OSN) Services’, *2012 IEEE 11th International Conference on Trust, Security and Privacy in Computing and Communications.*, pp. 648-655.

Vidya, R., Priyankka, R. P. J. and Kumar, G. N. (2014) ‘A system learning of connection with humans by online social networking — A rapport by means of creating usable customer intelligence from social media data: Clustering the social communities’, *2014 International Conference on Science Engineering and Management Research (ICSEMR).*, pp. 1-6.

Kamhoua, C. A., Kwiat K. A. and Park, J. S. (2012) ‘A game theoretic approach for modeling optimal data sharing on Online Social Networks’, *2012 9th International Conference on Electrical Engineering, Computing Science and Automatic Control (CCE).*, pp. 1-6.

Koohpar, F. K., Fatemi, A. and Raji, F. (2020) ‘Data availability improvement in peer-to-peer online social networks’, *in IET Information Security*, vol. 14, no. 3, pp. 332-341.

Akkuzu, G., Aziz, B. and Adda, M. (2019) ‘Advantages of Having Users' Trust and Reputation Values on Data Sharing Process in Online Social Networks\*’, *2019 Sixth International Conference on Social Networks Analysis, Management and Security (SNAMS)*., pp. 189-195.

Kapil, G. et al. (2020) ‘Managing Multimedia Big Data: Security and Privacy Perspective’, *(2020) Advances in Intelligent Systems and Computing*, 1077, pp. 1-12.

Mr, N. and Harini, N. (2020) ‘Secure Request Response (SRR): A Framework to Classify Trust/Distrust Relationships in Social Networking’, *Advances in Intelligent Systems and Computing*, 1025, pp. 307-317.

Alshaikh, M. et al. (2020) ‘Social Network Analysis and Mining: Privacy and Security on Twitter’, *2020 10th Annual Computing and Communication Workshop and Conference, CCWC 2020*, art. no. 9031147, pp. 712-718.

Papaioannou, T., Tsohou, A. and Karyda, M. (2020) ‘Shaping digital identities in social networks: Data elements and the role of privacy concerns’, *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*., pp. 159-180.

Al-Charchafchi, A., Manickam, S. and Alqattan, Z.N.M. (2020) ‘Threats Against Information Privacy and Security in Social Networks: A Review’, *Communications in Computer and Information Science*., pp. 358-372.

Guntha, R., Rao, S.N. and Ramesh, M.V. (2020) ‘Architectural Considerations for Building a Robust Crowdsourced Disaster Relief Application’, *2020 International Conference on COMmunication Systems and NETworkS, COMSNETS 2020*, art. no. 9027394, pp. 638-641.

Watanabe, T. et al. (2020) ‘Follow your silhouette: Identifying the social account of website visitors through user-blocking side channel’, *IEICE Transactions on Information and Systems*, E103D (2), pp. 239-255.

Assibong, P.A. et al. (2020) ‘The Politics of Artificial Intelligence Behaviour and Human Rights Violation Issues in the 2016 US Presidential Elections: An Appraisal’, *Advances in Intelligent Systems and Computing*, 1016, pp. 295-309.