

1 **Automatic Identification of Privacy and Security Requirements:**  
2 **A Systematic Literature Review**

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4 FRANCESCO CASILLO, Department of Computer Science, University of Salerno, Italy  
5 VINCENZO DEUFEMIA, Department of Computer Science, University of Salerno, Italy  
6 CARMINE GRAVINO, Department of Computer Science, University of Salerno, Italy  
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10 The utmost importance of privacy and security requirements in software development calls for adopting methods  
11 that enable the identification and proactive mitigation of these issues during the system development. Our survey of  
12 45 primary studies provides a comprehensive overview of the methods, document types, and datasets employed in  
13 tackling this critical challenge, along with an analysis of approaches demonstrating superior performance based on  
14 document types and specific identification problems. Analysis reveals a wide adoption of AI-based systems on diverse  
15 datasets, showcasing the effectiveness of leveraging various source of information to identify privacy and security  
16 requirements in software development.  
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18 CCS Concepts: • **Software and its engineering** → **Requirements analysis**; • **Security and privacy** → **Software security**  
19 **engineering**.

20 Additional Key Words and Phrases: Software requirements, privacy & security, automatic identification

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27 **1 INTRODUCTION**

28 Requirements Engineering (RE) plays a pivotal role in software development by encompassing vital activities  
29 that focus on understanding and fulfilling the capabilities and characteristics demanded by a system [61].  
30 Through stages like elicitation, analysis, specification, and validation, RE aims to comprehend customer  
31 needs and translate them into precisely defined requirements [55], which include non-functional requirements  
32 (NFRs). The latter specify system qualities that extend beyond its core functionality, encompassing various  
33 attributes essential for its overall performance and success. Among NFRs, privacy and security have emerged  
34 as prominent concerns in software development. Incidents involving unauthorized data exploration, misuse of  
35 information, and unauthorized disclosure of personal data have raised awareness regarding privacy risks [52].  
36 Users may be unaware of when and for what purposes their sensitive information is collected, analyzed, or  
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40 Authors' addresses: Francesco Casillo, fcasillo@unisa.it, Department of Computer Science, University of Salerno, Via Giovanni  
41 Paolo II, 132, Fisciano(SA), Italy, 84084; Vincenzo Deufemia, deufemia@unisa.it, Department of Computer Science, University  
42 of Salerno, Via Giovanni Paolo II, 132, Fisciano(SA), Italy, 84084; Carmine Gravino, gravino@unisa.it, Department of  
43 Computer Science, University of Salerno, Via Giovanni Paolo II, 132, Fisciano(SA), Italy, 84084.

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