Abstract

The dissertation presents the results of a research process aimed at addressing the question: "Does deepfake technology enable the generation of realistic recordings that can influence the decisions of those who view them, thereby posing a threat to national security?". The work consists of an introduction, one methodological chapter, and five substantive chapters. It is concluded with a summary and a bibliography, which serves as the primary source of theoretical knowledge. Additionally, a list of illustrations, tables, graphs, and a sheet of four appendices are included, containing the survey's metadata, additional statistical analyses, the research questionnaire, and statistical abbreviations used in the study.

The first chapter presents the methodological foundations of the study, including the justification for the topic selection, research objectives and subject, and a description of the assumed research problems and hypotheses. The applied research methods, such as secondary data analysis and experimental research, are outlined, along with the research assumptions and limitations.

The second chapter discusses the theoretical impact of deepfake technology on individuals and their perception of reality. It introduces key definitions and reviews existing research findings. A theoretical analysis is conducted on how fake recordings can distort perception and directly affect personal security and, indirectly, structural security, as components of state and societal functioning.

The third chapter describes the technical aspects of creating deepfake recordings. It provides a detailed explanation of the process, required resources and necessary technical knowledge. The chapter presents research findings explaining how deepfake recordings are made and what tools are needed.

The fourth chapter discusses the results of the experiment concerning the ability of Internet users to recognize manipulated content. It analyzes how individuals react to fake multimedia materials and what factors, for example psychological and personality traits, influence the perception of manipulation.

The fifth chapter analyzes the experimental findings regarding the impact of deepfake recordings on personal security. It describes how deepfake videos affect individuals' decisions in the context of financial fraud.

The essence of the sixth chapter is to provide recommendations for countering the threats posed by deepfake technology, with a particular emphasis on practical aspects. Tools and strategies for counteracting activities using deepfake technology in areas such as

disinformation, personal fraud, intimidation, or attempts to compromise an individual or organization are proposed.

In the conclusions of each chapter and the final section, the main findings of the research are summarized, and the results of hypothesis verification are presented. The growing need for the development of defensive mechanisms, both technical and educational, is highlighted. The necessity for further interdisciplinary research on deepfake technology and its societal impact, especially in the context of manipulation and disinformation, is emphasized. The analysis of the influence of fake recordings on public trust, decision-making processes, financial markets, and political stability may provide valuable insights into the scale and nature of the threat.

Keywords: national security threats, personal security, structural security, deepfake recordings, image manipulation, disinformation.