

Report and Presentation Guidelines:

Title:

“What a Digital Forensics Investigator Should Know About Steganalysis of Digital Content”

Submission Deadline:

See Brightspace.

Word Count Requirement:

Team of 3 Members:

Minimum of 7,000 words in total for the report with a 9-minute presentation.

Late Submissions:

Late submissions will incur a penalty of 20% per day.

Submission Details:

Submit your assignment as **one MS Word document** through Brightspace.

Ensure submission is made by the specified deadline.

Adhere to academic honesty guidelines and cite all sources used.

Level 1: No Artificial Intelligence (AI). The assessment must be completed entirely without AI assistance. AI must not be used at any point during the assessment. ***(Except if your team is specifically using AI for Steganalysis in the experiment/Primary Research stage).***

Report and Presentation Guidelines:

All submissions will be checked via Turnitin and Generative AI checkers to ensure originality.

Assignment Weight:

40% of your overall grade is based on the research paper and the accompanying PowerPoint presentation.

Report Guidelines: (these are only guidelines)

Title Page:

Include the report's title, your name(s), student number(s), the actual word count, and university logo.

Table of Contents:

List sections and subsections with page numbers for easy navigation.

Abstract:

Provide a concise summary of the report's key findings and conclusions in 150-200 words.

Introduction:

Explain the significance of steganography/steganalysis in digital forensics.

Outline the purpose and scope of the report.

Background of Steganalysis:

Define steganalysis and explain its relevance in digital forensics.

Steganographic Techniques:

Report and Presentation Guidelines:

Describe common methods for hiding data in different file formats (e.g., images, videos, and audio files).

Steganalysis Techniques:

Detail various methods and tools used to detect hidden data in steganographic files.

Challenges and Limitations:

Discuss the difficulties encountered during steganalysis and explore potential countermeasures.

Case Studies/Primary Research:

Present real-world examples where steganalysis played a critical role in uncovering hidden data during investigations.

Run some experiments developing and uncovering hidden data.

Best Practices for Digital Forensics Investigators:

Provide guidelines for effective steganalysis during investigations to ensure thorough and efficient data recovery.

Conclusion:

Summarize the key takeaways from the report and emphasize the importance of steganalysis expertise in digital forensics.

References:

Compile a properly formatted list of all sources and research papers used in the report.

Report and Presentation Guidelines:

Presentation Guidelines: (these are only guidelines)

Title Slide:

Include the title of your presentation, your names, and student numbers (Mandatory).

Introduction Slide:

Provide a brief overview of the relevance of steganalysis in digital forensics.

Background Slide(s):

Explain what steganalysis is and its importance in investigating hidden digital content.

Steganographic Techniques Slide(s):

Showcase visual examples of common steganographic methods, such as hidden data in images or audio files.

Steganalysis Techniques Slide(s):

Detail key methods and tools used to detect hidden data.

Challenges and Limitations Slide:

Highlight the obstacles and limitations that digital forensics investigators face when performing steganalysis.

Case Studies Slide(s):

Showcasing real-world case studies where steganalysis was pivotal.

Best Practices Slide(s):

Recommendations for digital forensics investigators on improving steganalysis practices.

Conclusion Slide:

Summarize the key points from the presentation.

Q&A Slide:

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Additional Tips for the Report and Presentation:

Visual Aids: Use diagrams, screenshots, and illustrations to clarify complex points and keep the audience engaged.

Concise Text: Use bullet points in presentations to maintain clarity and avoid overloading slides with text.

Rehearse: Ensure your presentation fits within the allocated time frame, 9 minutes for team presentations.

Professionalism: Maintain a clear, organized structure in both your report and presentation to ensure clarity.

Plagiarism Checks:

Turnitin: All assignments will undergo plagiarism detection via Turnitin.

Advanced Checks: In addition, assignments will be reviewed using Large Language Models (LLMs), such as ChatGPT, to identify and prevent plagiarism.

The use of Generative AI is not permitted for the assignment.

Team Option:

The presentation will extend to 9 minutes, allowing each team member to contribute a section. Topics can be divided as follows:

Member 1: Introduction, Background of Steganalysis, Steganographic Techniques.

Member 2: Steganalysis Techniques, Challenges, and Case Studies.

Member 3: Best Practices, Conclusion, and Q&A management.

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Success Criteria:

To succeed in this assignment, focus on clear, detailed explanations in both the report and presentation. Engage with practical examples, and ensure your research is thorough and well-cited.