CSC 5991 Cyber Security Practice Team Projects

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General Information

- A research project with 2-3 individuals
  - Building a new system
  - Improving an existing technique
  - Performing a large case study
- Deadlines
  - Project proposals due on Feb 24
  - Project checkpoint on March 28
  - Project presentations are on April 20 & 25
  - Project final reports due on April 25

Grading

- Project Proposal: 50 points
- Checkpoint Presentation: 50 points
- Final Presentation: 60 points
- Final Report: 100 points
- Total: 260 points

Project Proposals

- A two-page description
- Title and author list
- Problem statement
  - Describe what the problem is and why it is important
- Related work
  - Write about state-of-the-art solutions to the problem
- Proposed new solution
  - Describe the plan of your proposed approach. Use diagrams or figures if needed
- Evaluation plan
  - Describe your evaluation plan. Effectiveness and performance. What tools/benchmarks/attacks/experiments? What deliverables?

Project Presentations

- Each team has 20 minutes + 5 minutes Q&A
- Two classes for the presentations
- Presentation format may include slides or demo

Project Final Reports

- 10-20 pages, single-column, 1 inch margins, 11-point size, double-spaced

- May contain the following sections
  - Introduction
  - Related work
  - Background
  - System architecture/System design/Technical approach
  - Implementation
  - Evaluation results
  - Discussion (e.g., limitations)
  - Conclusion and future works

Project Final Reports

- Each team must submit a project final report. The report must have a title page, main content, and references. The report should be 10-20 pages, single-column, 1 inch margins, 11-point size, double-spaced. To facilitate the grading of your report, please follow the suggested organization listed below.

- The title page should include
  - the title of the paper or project
  - team member names and email addresses
  - course name, number, and instructor's name
  - a maximum 300-word abstract
  - three to five keywords.

Project Final Reports: Research Papers

- Introduction
  - (5 points) Discuss the background and motivation of your work.
  - (5 points) Summarize the research problem
  - (5 points) Summarize the proposed approach to the problem and the results
- Related work
  - (15 points) Discuss research related to yours and make comparison if there are closely related work.
- Your approach
  - (20 points) Describe your approach in detail. You may present your result in any way you want as long as you believe it's convincing and clear.
- Validation of your approach
  - (30 points) Prove or demonstrate the effectiveness and/or efficiency of your approach. You may do this through theorems, experiments, etc.
- Conclusions and possible future work
  - (10 points) Summarize the conclusions of your work. Future work is optional.
- References
  - (10 points) List all the citations referenced in your paper. You will lose 1 points for each dangling reference (i.e., the reference not cited in the main text).

Project Final Reports: Survey Papers

- Introduction
  - (5 points) Discuss the background
  - (5 points) Summarize the surveyed research area and explain why the surveyed area has been studied.
  - (5 points) Summarize the classification scheme you used to do the survey.
  - (5 points) Summarize the surveyed techniques with the above classification scheme.
- Survey details
  - (50 points) Present the surveyed techniques using the classification scheme in details.
  - (10 points) Identify the trends in the surveyed area. Give evidences for your decision.
- Conclusions and possible future work
  - (10 points) Summarize the conclusions of your survey.
- References
  - (10 points) List all the citations referenced in your paper. You will lose 1 points for each dangling reference (i.e., the reference not cited in the main text).

Teams and Projects

- Team 1: Zhenyu Ning and Leilei Ruan
  - IoT Security
- Team 2: Shruthipriya Soranjerry Baskar and Jayasurya Santhanagopal
  - Privacy Preservation by a Proposed concern for Snapchat like Android Applications.
- Team 3: Rachna Naik and Keya Shah
  - IoT OS Security: Zephyr

Teams and Projects

- Team 4: Jacob Heaney and Lucas Copi
  - Mobile Space Scanning and Reconnaissance
- Team 5: Rui Chen and Chiara Conflitti
  - Using Graphics in Two-Factor Authentication
- Team 6: Mohammed Yasa, Daniel Mackay, and Zaid Nackasha
  - Buffer Overflow
- Team 7: Isaac Tedla
  - RFID security