Cybersecurity Research Seminar
Fall 2015

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#2: Bids, Literature Search Activity

Class #2

- Discussion of project topics & bids
- Talk about literature search
  - Tools, tips, techniques
- Paper reading activity

What project topics look interesting so far?

Any other ideas you want to discuss?

The Bid

- Short written document detailing:
  - A personal/team statement of interest in a particular topic area (hopefully relevant to the problem)
  - A description of the problem including possible tasks involved in the project and a discussion of your preliminary literature search (~2-4 references)
  - An initial sketch for your approach and possible project outcomes
  - A description of personal knowledge, skills, experience, etc. relevant for the project

  - Due **Sept 12** (but don't worry, it should be pretty easy)

Literature Search

- Finding good background / related work is one of the most important parts of a research project
  - If you don't have a good understanding of what has been done, you can't be sure you're doing something interesting

- So, what's the best way to do a lit search?

1 – invest time

2 – use good search tools

3 – know what is a helpful reference

Search Tools

- http://scholar.google.com
- http://arXiv.org
- Research databases (see http://library.cmu.edu)

A Helpful Reference?

- How do you determine whether a paper you find will be useful as background or related work?
  - Read the whole thing, then decide...
  - Follow a few easy steps

Step 1: Find the WHAT.

Skim the abstract, figures/captions, and conclusion to figure out WHAT they are doing.

If it sounds like it might be useful, keep going.

Step 2: Find the WHY.

Skim the introduction and background sections to figure out WHY they are doing what they are doing.

If their motivation is at all relevant to yours, keep going.

Step 3: Find the HOW.

If you've come this far, it's probably relevant.

Skim the section titles and keywords to identify important stuff, then read this important stuff. This will hopefully give you enough detail to understand HOW they are doing what they are doing.

Step 4: Explore the details.

If you're still reading, it's interesting enough to read (or mostly read).

Figure out things like a) how good are their results, b) what are their assumptions, c) what models are they using, d) what are the limitations of their approach, etc.

Let's try it.

September 11:
TD Presentations III

September 16:
Discuss proposals