ECE455: Student Self-Survey

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1. What does "cyber-security" mean to you?

   I understand cybersecurity to be mostly about making sure computer software (and hardware) runs as it should run, and in particular giving access to the intended parties to perform certain actions or access data. I believe good security usually means writing robust software that is intuitive for the user, but also involves the quick detection, investigation, and resolving of attacks.

2. What do you expect to get out of this course?

   As you mentioned in the first lecture, I'm hoping to get a general overview of the different subfields within cybersecurity. I do not have much background in cybersecurity – the little that I know mostly comes from web development to prevent against common attacks.

   The three more-concrete goals I have from this course are: looking for ways to further secure the software that I write; understanding the ways to protect my own digital actions; and looking for potential research areas for myself in the future.

3. Do you have any special topics or ideas you'd like to explore?

   I've recently been interested in (and am currently taking an independent study on) program analysis, i.e., the formal analysis of programming languages. This seems to be an area of active research and has implications for cybersecurity – it allows a person to "formally verify" an implementation: check that an implementation does exactly what the programmer expects it to, such as preventing race conditions, memory leaks, and bad failure modes. There are current attempts to make fully-verified compilers and operating systems now. I'm still very new to this topic, so I would like to learn about it in this class as well.