

So What's The Point...

Ming Chow

...of web security?



Chris Eng 

@chriseng



No security at all is what's coming out of most places. I don't hire any entry level people on my team. The teams that do take fresh college grads, though (our dynamic scan analysts for example), see candidates all over the map. Never mind security, some of them have no idea how the web (or the Internet) works. So much is abstracted from developers in a typical CS curriculum that they are often unprepared to understand how things actually *work* which is core for security... as you know.



2/3/16, 1:20 PM

VULNERABILITIES / THREATS

4/7/2016
11:00 AMKelly Jackson
Higgins
News

Connect Directly

0 COMMENTS
COMMENT NOW

Login



50% 50%



Top US Undergraduate Computer Science Programs Skip Cybersecurity Classes

New study reveals that none of the top 10 US university computer science and engineering program degrees requires students take a cybersecurity course.

There's the cybersecurity skills gap, but a new study shows there's also a major cybersecurity education gap -- in the top US undergraduate computer science and engineering programs.

An analysis of the top 121 US university computer science and engineering programs found that none of the top 10 requires students take a cybersecurity class for their degree in computer science, and three of the top 10 don't offer any cybersecurity courses at all. The higher-education gap in cybersecurity comes amid the backdrop of some 200,000 unfilled IT security jobs in the US, and an increasing sense of urgency for organizations to hire security talent as cybercrime and cyber espionage threats escalate.

Robert Thomas, CEO of CloudPassage, whose company conducted the study, says the security gap in traditional computer science programs is worrisome, albeit not too surprising. "The results were pretty profound," Thomas says. "When we tested the top universities' computer science degrees, it was disturbing to find that very few require any kind of cybersecurity [instruction] as part of the curriculum to graduate" with a computer science degree, he says.

<https://www.darkreading.com/vulnerabilities---threats/top-us-undergraduate-computer-science-program-s-skip-cybersecurity-classes/d/d-id/1325024>

"69 percent of web applications are plagued by vulnerabilities that could lead to sensitive data exposure, and 55 percent by cross-site request forgery flaws; 25% of web apps still vulnerable to eight of the OWASP Top Ten" (circa 2017:

<https://www.helpnetsecurity.com/2017/02/14/web-application-vulnerabilities/>)

...of ask questions, asking for help?

*"Knowing how to ask for help is the key
to survival" --Alva Couch*

...of looking things up via Google, Stack
Overflow?

- Take responsibility of your own learning
- Develop intellectual curiosity
- If you can't do this, then perhaps Computer Science is not for you as it is necessary for high level courses (e.g., COMP 105, see <https://www.cs.tufts.edu/comp/105/notes.html#Toc15>)

Approaching 105

100-level course

Responsibility for your own learning: lecture is the tip of the iceberg

Announcement: Syllabus scavenger hunt (participation grades)

Systematic programming process: we can't observe process, but it will affect your time spent by a factor of 2, 3, or 4.

Awareness of your own learning: **Metacognition**

...of providing you readings that may go
over your head?

Get out of your comfort zone.

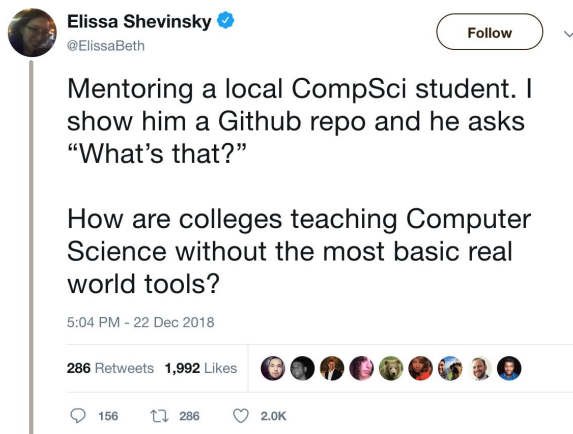
...of using revision control (i.e., Git)?

*“Universities should teach distributed source control starting with the first programming course. It is a fine way to distribute code to students; they can get bug fixes easily. In later courses they can use it to help support pair programming. We should treat it as easy, **make it a habit**, and not make a big fuss about it.”*

(Source: <https://www.cs.tufts.edu/~nr/students/scm.html>)

...of using GitHub, Heroku, and other tools?

- Use real tools and systems
- Many friends and colleagues have lament Computer Science grads are not prepared to build with today's *evolving* platforms
- <https://twitter.com/ElissaBeth/status/1076644664961314816>



...of making you write a README for
each lab and assignment?

- Writing skills
- Articulate what you learned
- Recordkeeping
 - See Josie Barth's (A18) advice "Rediscovering an old project: OurHouse"
(<https://josiebarth.com/2018/11/25/rediscovering-an-old-project-ourhouse/>)

So why is this most likely the last time I
will teach this course?

"Programming by poking: why MIT stopped teaching SICP"

"that they felt that the SICP (Structure and Interpretation of Computer Programs) curriculum no longer prepared engineers for what engineering is like today. Sussman said that in the 80s and 90s, engineers built complex systems by combining simple and well-understood parts. The goal of SICP was to provide the abstraction language for reasoning about such systems.

Today, this is no longer the case. Sussman pointed out that engineers now routinely write code for complicated hardware that they don't fully understand (and often can't understand because of trade secrecy). Nowadays, we do programming by poking."

(Read: <http://lambda-the-ultimate.org/node/5335>)

One last thing: so what *WAS* the point of using GitHub?

Portfolio

<https://github.com/blog/2343-why-version-control-is-required-for-comp-20-at-tufts-university>

<https://twitter.com/SamuelDeats/status/1106968793870491651>



Samuel Deats

@SamuelDeats

Follow

Just a reminder: I don't care what school you went to. I don't even look at it when hiring. I only care about your portfolio or demo reel. If you can learn without going to one of these insanely expensive schools, do it.

Cartoon Brew  @cartoonbrew

Calarts students are protesting their \$50.8K annual tuition. But really, US animation students everywhere should be protesting. Here are some other animation school tuitions for 2019-20 programs:
RISD: \$51.8K...

10:21 AM - 16 Mar 2019

3,058 Retweets 11,482 Likes



From Tommy Tang, Class of 2018

*Just another interesting side note, with the two companies that I have gotten offers from (Roblox and Activision), I haven't really gotten a technical interview. With Activision, I had four interviews, and the only technical question I was asked is to reverse a string in C. With Roblox, I just had a coding challenge and no technical interview. No one really cared all that much about school and classes either. **They all cared a lot more about what projects I have worked on, what I did for them, and what I learned. Leading a JumboCode project was huge and I'd say one of the big reasons I was accepted to Stanford, and then accepted to those companies.** Every single interviewer I spoke with was fascinated by the project and impressed with the work we'd done. I cannot stress the importance of Jumbocode enough, so please help keep the organization strong. Anyway don't know if this information is useful to u, but thought I'd share it anyway.*

Thank you!