

Women In Computer Science are Ballin' Hard

Emily Warman, a senior at Illinois Institute of Technology, leans forward off the broken blue couch to bounce her knee habitually high; her black jeans and turtleneck cling to her tightly. She has wild hair like Hermione, wide almond eyes, and there's a twang of intensity to her voice. Warman is intimidating in her approach, yet vulnerable in every word.

Warman has an innate drive to make the impossible possible. She fell in love with Computer Science (CS) after transferring from DePaul to IIT her freshman year – Warman was on the hunt for something that would always challenge her, something she could not learn on her own.

Warman laughs; smiling wide she says, "I got my first internship after being a CS major for only a month." Her first internship was with Visa where she was a software engineer. The internship program was unusual for a typical top tier company. Most companies will ask CS interns to contribute on existing projects, but at Visa, the interns had their own exclusive project.

Warman's team developed the product from the opening of a brand new project to actually shipping it out for people to download.

"What was really interesting about the senior management and the intern managers was that it was mostly women." Emily throws up her hands and smiles wide, like she still can't believe it.

"Most of the developers were men, but the loudest voices were women."

In IIT's CS program there is a ratio of 10% women to 90% men. In the working world, it's a whopping 13%. Books and articles have tried to answer: Why is that? According to the article

“When Women Stopped Coding” by Stephen Henn for NPR, many pioneers of computing were women and in 1985 the field consisted of 30-40% women; however, in 1984, the technological gender binary began, pushing boys into computing. “This idea that computers are for boys became a narrative. It became the story we told ourselves about the computing revolution. It helped define who geeks were, and it created a techie culture,” writes Henn.

Since there are so few women in CS, gender tends to be correlated with disrespect. Warman believes this happens so frequently in CS because there are so few women. “I feel like the few of us there are, are very known.” There is more opportunity for women to be harassed because there aren’t as many women so they just keep going after the same 13% of the population.

Most women in CS are late enterers, meaning that many of their male counterparts came into university already knowing how to code, and in some instances have ten years experience with code, while most women, due to the technological gender binary, have to start from scratch. “You’re set up to fail and then you’re harassed for it.”

Although women are only 10% of the CS population, they’re more than 50% of the Teaching Assistants (TA) at IIT. Warman was a TA for an Intro to CS class with one of the few female professors in her field. This class consisted of first semester freshman. Everything was going well for the first half of the semester, until Emily received a text from her friend with a screenshot of some YikYak comments. YikYak is an anonymous posting site where the posts are grouped by location. Warman and other women in her major knew these posts were about her due to the physical descriptions of Warman and the fact that there are so few female Computer

Science TAs with long brown hair and glasses. “Some of [the posts] were kind of flattering, and then there was one comment like, ‘she’s such an alpha bitch’ and another saying ‘I wanna teach her a lesson.’”

The worst part? Warman had to teach the rest of the semester wondering who wrote these messages. Which student thought she was a bitch? Which one degraded her and wanted to ‘teach her a lesson?’

After returning from the Grace Hopper Celebration of Women in Computer Science Conference in Houston in the fall of 2015, Emily went in to see one of her professors for a make up exam. Looking back, Emily remembers failing this exam, which is extremely atypical for her. She was stressed and disappointed due to the extreme nature of the technical interviews, and due to the dog eat dog culture of the conference.

Emily confided in her teacher why she thought she did so badly on the exam. He responded with, “You know, you’re extremely attractive and I understand that what you’re doing is difficult.” Yikes.

Okay, but hold on a second. Let’s step back to look at how the culture of CS is changing. There are huge diversity initiatives with universities and big businesses (such as Microsoft, Google, and Facebook) to bring in more female Computer Scientists and Engineers. This means, the

number of women in these careers is slowly starting to grow again. In other words, it's not a boys club anymore. Thankfully, the language is beginning to change, but change takes time.

Another IIT student, who would like to remain anonymous, returned to the university for recruiting was told by her hiring manager to star the resume if it's a female, but "if you get a black female, call HR immediately and we will schedule an interview." Is this unfair? Emily doesn't think so. It's corrective. "We didn't expect to be computer scientists and that's why we have less skills even though we have the same potential. I guess it makes you understand things like affirmative action a little more."

The culture of CS is changing slowly. "[His comment] was not coming from a bad place" Warman shrugs, half frowning and rubbing off her makeup with her hands. "He should have used a different word than attractive...he doesn't understand that it's not an appropriate thing to say to your 21-year-old student." It's true, and he actually gave Emily some very valuable advice. He suggested that she should find a mentor in her field like her, someone with the same interests and gets the same sort of negative attention from not only men, but also other women.

The Grace Hopper Celebration of Women in Computer Science conference was supposed to be a place where Warman felt really accepted and a place where she fit in, but she didn't. "I was kind of depressed. You do this major and you feel like you don't fit in for so long and when I went I really expected to feel a kinship with other people. I didn't feel that."

The community is conscious that women cutting other women down is a major issue. There are so few women in CS and Engineering that women really cannot afford to make other women feel bad about themselves. It's competitive, sure, there's only so many jobs, sure, but it's more important to band together and support the goals of your minority peers.

The C.O.O. of Facebook and author of *Lean In*, Sheryl Sandberg, spoke at the Grace Hopper Conference in 2015. IIT created their own Lean In circle after watching her speech. One of the most recent issues the circle spoke about concerned an older, male faculty member who works in a lab at IIT. The lab has other staff members along with a 16-year-old female High School intern. Allegedly, this man made a comment to another staff member about how if anything were to happen between him and the High School intern that he's disappointed it would be considered statutory rape.

Yikes, again.

This time there isn't a forgiving way to look at this story. Though instances like this are disgusting and should be talked about, this is not a common core conversation topic of the Lean In circle. The top three issues women discuss are:

1. Men making inappropriate advances or comments. Or, men ignoring women all together.
2. Many women are afraid to ask for an opportunity because they feel they don't know enough.
3. Feeling alone.

In a Slate article “My Year of Leaning In,” Katherine Goldstein writes “The group seemed to have an impact not only on our actions, but also our self-perceptions. More than one of the members noticed that the group had made them not only more conscious of their own careers, but also more thoughtful about helping younger, more junior women excel.”

When Warman worked for Visa in Denver, her intern team consisted of herself and two other men. One of the men had previously worked for a start up and the other had worked for JP Morgan the summer before. They were also a year ahead of her in school. Due to Warman’s strong will and natural tendency to be honest, she was up front with her coworkers about her lack of experience, in hopes that they would understand.

They didn’t. In fact, they didn’t even acknowledge it, or her, at all. Emily’s teammates completely blew her off for the first half of the internship. “I don’t know if it was gender or not,” Emily shrugs, pushing the curls out of her face. “Maybe a man wouldn’t have been honest, I don’t really know how much of it was my gender, but I would have great ideas and they would completely ignore me.” Yet, to make things worse, not only would they ignore her ideas, but they would use Emily’s ideas in meetings for their own personal gain.

After six weeks of the program, Emily had proved in multiple instances that she was capable and had potential, despite being behind. “It’s too bad that I had to wonder, is it because I’m inexperienced or is it because I’m the only female on this project?” At this point, Emily is looking down at her hands and pulling at her cuticles. “I felt really left out for a long time.” It’s

like fighting an uphill battle where someone else always has control over the incline. Despite this, Emily was extremely satisfied with her internship. “It worked out in the end. I contributed a lot, I learned a lot, and I got a return offer.”

Despite the hardships and the discomfort that Warman has had to face, she is one of the most successful people in her major. “Feminism in engineering and science is a lot about seeing things for what they are, and maybe not getting immediately inflamed about it.” It’s important to try and understand where people’s intentions are and educating someone if it’s really upsetting. It’s important to be a positive influence, to give others a good example of how to treat women in the work place. “By being aggressive immediately...you have to know the culture and you can’t just come in and disrupt, you kind of have to go with the flow a little bit and decide what moments worth educating on. Some comments aren’t always trying to cut you down, they truly just don’t understand. I think women are very conscious of that. “

Emily is practically bouncing out of her seat at this point; she is so passionate about the women in her life and especially the women in her field. “All the women in computer science are ballin’ hard, they’re way overachieving above the men.” She laughs, smiling in the reflective glow of streetlights piercing through the windows.