

8/12/2018

WOMEN TECHMAKERS SCHOLARS PROGRAM – APPLICANT: RAMSHA SIDDIQUI

QUESTION 1:

How do you think computer science, computer engineering and/or a closely related technical field is changing the world? How do you plan to contribute?

In terms of Computer Science, I believe that the ease of access is changing the way our world works every day. By ease of access, not only do I focus on the fact that right now almost anything in the world can be accessed from anywhere else in the world at any time, but also on how easy it is to access it. Almost all services/products available today did exist before, but it was hard to get ahold of them; now, thanks to the various platforms of entrepreneurship and advertising, it has become a lot easier to access things. However, there still is a slight problem with the internet and consumer-based advertising; most of the ads we see today are based on our previous encounters - like when I started using WordPress, all I saw were ads of WordPress everywhere even though I was already on it. This proves that the internet most certainly knows what we're doing, but doesn't quite know our interests i-e, what we're looking for. An example could also be seeing an ad of the same dress that you just bought from Zara. Though it may be tough to accomplish, I believe that Machine Learning and Reinforcement Learning can help us improve this. Which is why my FYP is based on making a machine learn one's interest in Fashion. Currently, Pakistan is producing hundreds of new brands every day releasing thousands of fabrics of different prints, embellishments, and cuts almost every month. If we can teach a machine to understand Clothing Patterns by looking at a person's wardrobe and previous choice of clothes, then it can easily predict one's preference in an upcoming collection, helping both brands as well as consumers. I hope that in the future, the research conducted for this project can be expanded to other categories of advertising as well.

QUESTION 2:

Please discuss the structural issues impacting underrepresented groups that you have observed or experienced in computer science, computer engineering, and/or a closely related technical field. What connection and/or effect do you think these have to the industry and/or the wider world?

In Pakistan today, the underrepresented groups most definitely include women and religious minorities. There are several structural issues that are causing this. Starting with education, most Pakistani women are either illiterate or study up to 8th or 10th grade only. The parental mentality behind this is that since women must eventually be married off and raise children, they don't need to get a higher education. Those who do aim for higher studies, have to work excessively hard in comparison to boys as the average merit is higher - mostly because the female population exceeds the number of seats available. Moving on to the industry, as the 2015 employment statistics show, about 80% of Pakistani women are unemployed; mainly resulting from educational ignorance. But even talking about manual labor and other technical fields of engineering such as Computer Science, most companies like to keep women hidden behind the curtains and offer them clerical jobs instead of practical work - an idea originating from religious boundaries and a gender-biased mentality that women can't do better than men. An example is a job I applied to this summer, where they asked me if I would be taking any maternal or marital leave soon, in which case I would not even be hired - which is an extremely wrong policy for young female applicants that's common here. These are only a few of the issues that I believe exist for the under-represented women of Pakistan and need to be fixed starting with proper standards of education. By proper, I'm referring to another underrepresented group on the rise these days, called the Urdu-medium folk. Oppressed by the British invaders of 1900s, people still give more importance to those who can speak English over those who simply can't - a case which also requires the country's immediate attention.

QUESTION 3:

Please write about an activity that you are currently or recently involved in to address structural issues for underrepresented groups in your field.

You should:

- Explain your role in that activity, and its reach and target audience.
- Describe any formal support you have for your activity, for example from your university, school or other entity.
- If you have been involved in multiple activities, please make sure they are all listed in your resume, then choose the most relevant one to discuss in detail here.

Last semester, I had a wonderful experience being a part of the Global UGRAD Exchange Program whose primary purpose is to help the under-represented groups in Pakistan to step up and make a name for themselves. The reason I was selected was due to a startup that I began last summer meant to help the under-represented female engineers and artisans of Pakistan. I believe that in a world where men won't employ women, at a young age like mine and an advancing technological world, it's only easier to create more options for women. One of these would be to become self-employed at home! I do know that many free-lancing websites such as Fiverr and Online-Business websites such as eBay and OLX already exist for such purposes but they are too broad, complex and expensive here in Pakistan. Which is why we have created a separate platform exclusive for female artists (students) to come together and create beautiful, culturally inspired artwork set for sale online at a price of their choosing paid to them in full. Besides our own exertion, we have also contacted several NGOs who work with previously unemployed computer-dilettante women teaching them how to enter data, privately advertise and conduct businesses on their own. Our startup is meant to be a non-profit organization helping craftswomen grow and become internet-aware as well as employing other female Computer Engineers to train, maintain and run the website. Initially limited to the City Lahore closely reaching out to other cities of the Province of Punjab, we were recognized for our idea and effort by Netsol's Ideapad 2017 and Plan9 LaunchPad 10. I am the co-founder of this organization and I hope to see it grow and expand even further once I graduate and give it my undivided attention.