



# GET TO THE WHITE BOARD

Pallika Kanani



# Before we Start, A Little Exercise

Look around you, and think of one person in this room that you admire.

You remember their name, right?

Ok, I'm now going to tell you a story

# The Story of Mahishasur

- In Hindu mythology, Mahishasur, the demon, created trouble, but was granted a special wish
- His special wish: “No man or god shall kill me”
- Fundamental assumption: “Women could not kill him”
- A special female form came into being, fully equipped to match his power, and destroyed him
- Making women feel invisible because of arrogance is still seen today
- Overcoming that is celebrated as a festival in India and the surrounding region
- Similar stories abound in other cultures too, to remind us to not underestimate women



# What demons are you fighting?

- A well meaning lab mate tells you “it’s not your fault that you’re not making progress on this theory problem, because, you know, women are better suited for systems”
  - *Even though your friends in system have heard exactly opposite remarks*
- You walk up to a poster at NIPS, and the author assumes you can’t possibly know anything about Machine Learning
  - *Even though he’s a first year graduate student and you look old enough to have completed your PhD five years ago*
- You’re hanging out at your company’s booth, and too many people assume you’re “HR”
  - *Even though you’re trying to recruit for a team of scientists you’ve been asked to build*
- These are all real stories and have happened to me

Implicit Bias

# How to fight Implicit Bias

- Identify bias and Acknowledge that all of us have some or other form of implicit bias
  - *I took the Harvard Project Implicit\* test for implicit bias for gender, I learnt that I'm mildly biased against women. Really.*
  - *Helps to not take these incidents personally, and also develop sympathy for people around you. Sometimes, the most well meaning folks might show biased behavior.*
- Know when to speak up (for yourself and others)
  - *Pick your battles and learn to identify situations where speaking up will make a difference*
- Build smart strategies
  - *Example: in a meeting when someone presents the same idea you did 5 minutes ago, learn to say, "As I suggested earlier..."*
  - *There is a lot of advice on the internet about mitigating implicit bias. Read up some of it.*
- Don't lose hope
  - *Ultimately, don't let others' biases put you down. In reality, it's their demon to fight.*

\*<https://implicit.harvard.edu/implicit/takeatest.html>

# Sometimes, The Demon is Within Us

- The biggest demon we're fighting is "I'm not good enough"
  - *This one also takes many other forms*
  - *"I'm not smart enough"*
  - *"I'm not knowledgeable enough"*
  - *"I'm not hard working enough"*
- Raise your hand if you've felt this way at least once in the last year
- Look around. Does the person you thought of at the beginning of the talk have her hand up?
- But she's so great! How could she possibly feel this way?

Imposter Syndrome

# Fighting the Inner Demon

- Plagues a large proportion of people, men and women, possibly at varying rates, especially in academia
- We are always expected to excel, and research can make you feel like a complete idiot, on a good day. On bad days, it can make you question your entire being
- You totally belong here! No ifs and no buts. Never forget why you came here!
- Know you're not alone, and read up on some excellent advice on the internet on how to tackle imposter syndrome.\*
- Build a support network around you. You've heard this many times, it's absolutely true!

\* <http://www.theexclusive.org/2018/09/impostor.html>

After this talk is done, make it a point to let the woman you picked know that you admire her, and that she's definitely good enough!

And make it a habit. If you think someone's good, let them know!



# And Now For My One Piece of Advice

If you remember one  
thing from this talk..

**Get to the White Board!**



# How Do Computer Scientist Innovate?

- Computers and all related concepts are an artifact of human creation
- One of the best ways to understand abstract ideas and create new ones that build on top of them is to discuss them with your colleagues and write them out on a white board
  - *Even if you're not completely sure about what you're saying*
  - *Even if what you're saying is actually wrong*
- Interaction at the white board helps to clarify mental model of the concept and arrive at good ideas
- This is crucial for making progress



# BUT QUITE OFTEN, WOMEN (AND SOMETIMES MEN) FAIL TO GET TO THE WHITE BOARD

Why? Because they tend not to speak up when they are unsure

# Wait, What?

- I don't have a scientific study to back this up, but in many many informal surveys I have conducted over the years, I have noticed this trend
- **Women often have a much higher bar on the correctness** of what they are saying before they speak up, especially in a technical discussion context
  - *Imposter syndrome could partially be at play here (Remember “I don't know enough”?), as well as cultural factors*
- This high bar they set for themselves actively prevents them from participating in the many informal and spontaneous spit balling sessions that happen in research labs
- Sometimes, external discouragement makes the problem worse
  - *Other people's implicit bias could make them regret speaking up*

# Does That Mean....

- Yes, that means that they get excluded from important research discussions, by choice or otherwise
- They lose opportunities to clarify confusions about their own mental models of important concepts and learn or build new ones
- They also lose opportunities to practice talking about technical concepts, which is another huge disadvantage in a research career
- They assume that ideas presented in a confident manner by others must be true, and even if they doubt them, they are often afraid to question them
- Over time, they get into a negative cycle of self fulfilling prophecy of “I don’t know enough”
- This takes them further away from making progress on research, which leads to other negative consequences, like losing advisor’s support, or funding, etc.

# Margo's Story

- Margo was a professor at Harvard, and is now at UBC, Vancouver. Here's a story she shared:
- A (brilliant) young woman came to my office one day and said, "The guys in the class know so much more than I do."
- I replied, 'No, they only sound like they do. I want you to go back to class and listen really really hard at the content of what they are saying and then come back and talk to me.'
- She did and reaction was something like, "OMG — you're right! They don't know any more than I do, but boy do they make it sound like they do!"

Look, there  
are many  
many factors  
affecting  
women's  
progress in  
Computer  
Science  
Research

The one that you can  
control the most is:

**GET TO THE  
WHITEBOARD!!**

# Seriously, Get To The Whiteboard!!

- The next time you're at a homework study session, or a paper reading group, or there's a random impromptu discussion happening in your lab, **grab a marker, and get to the whiteboard**
- Force yourself to speak out ideas related to the discussion, even if you're not entirely sure about what you're saying
- Don't be afraid about how you will be judged. It's research. No one really has a clue.
- You will soon realize that you're roughly at the same level of understanding as your peers, and that you do have something valuable to contribute to the discussion



# Imaginary Whiteboards

- When lab-mates are walking to the cafeteria for lunch, or you're all going for a hike, or whatever
- Participate in those random discussions. You will learn a lot more there than from just reading papers
- Networking is something that actually improves the intellectual quality of your ideas
- Remember, it's not a contest. You're all here to learn from each other

# And Don't Forget To Have Fun At The Whiteboard!



# THANK YOU!

And Thanks to my support network for their inputs