Navigating the Data Science Landscape

Half-day workshop at

International Conference on Applied Statistics, ICAS 2019

Institute of Statistical Research and Training (ISRT)

University of Dhaka, Dhaka, Bangladesh

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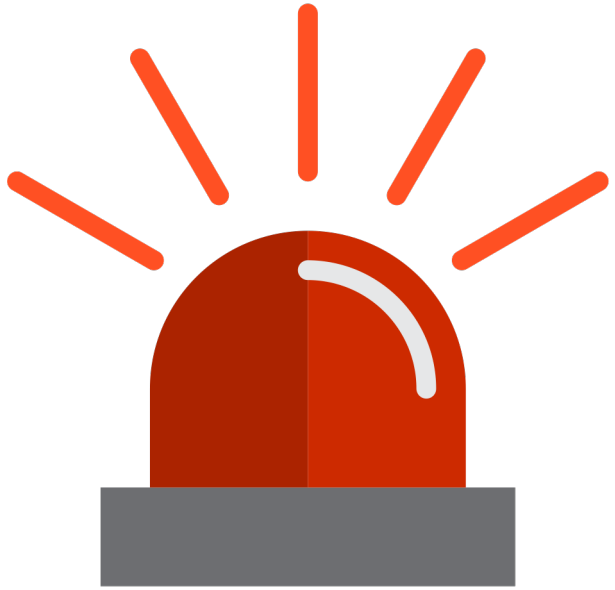
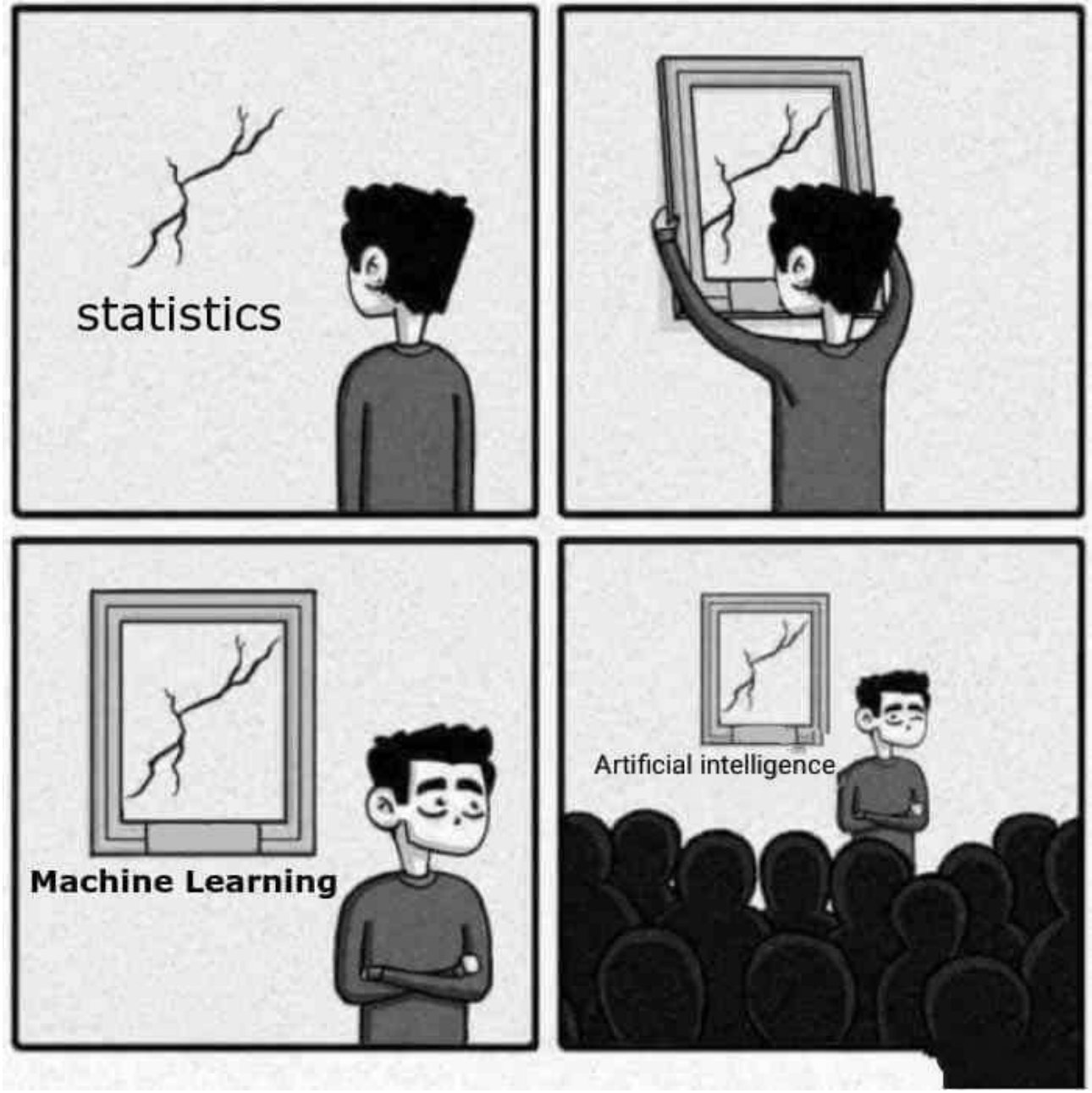
Part 3
How to be a Data Scientist

Statisticians are partly in but still a long way to go



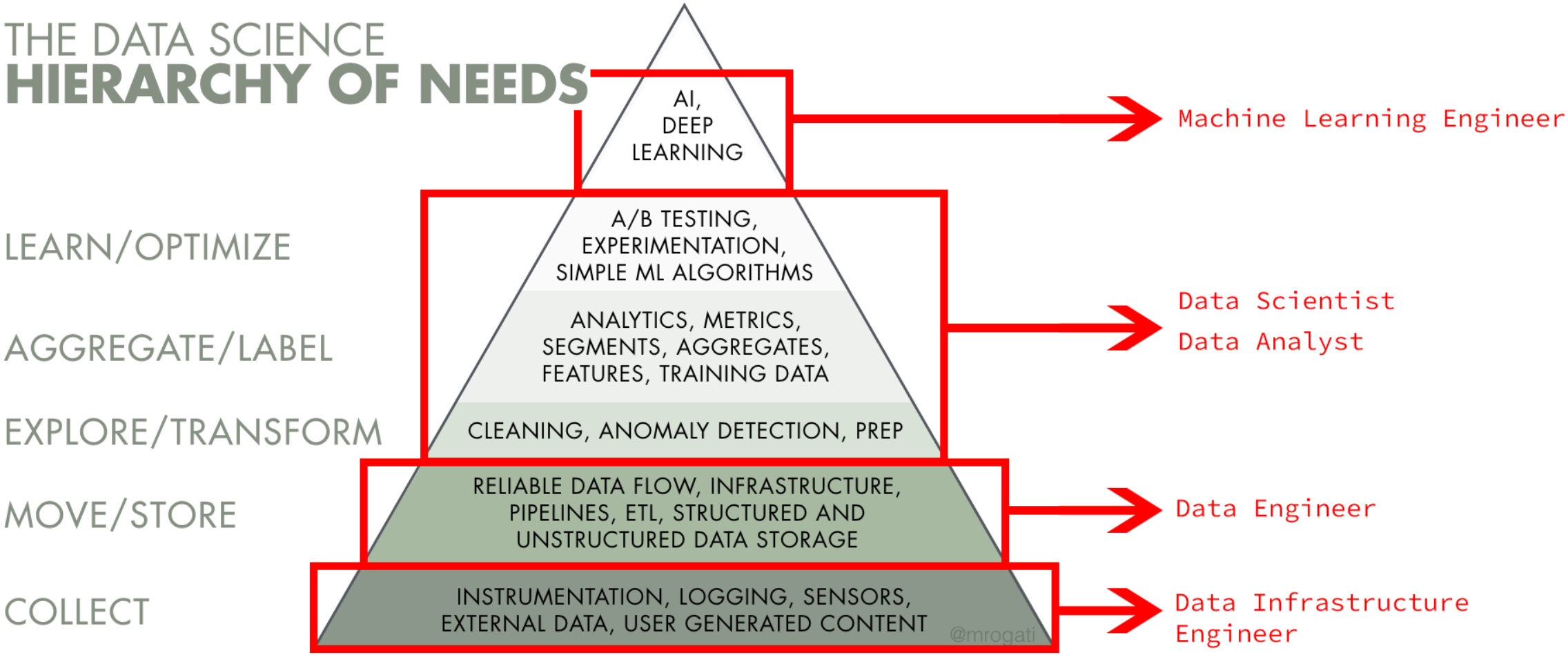
A sign like this on a slide may make you feel uncomfortable and offended.

Please be aware.


statistics
Machine Learning
Artificial intelligence

The *science* part of Data Science is very much statistical but Data Science is more than statistics

~~A P J Abul Kalam~~



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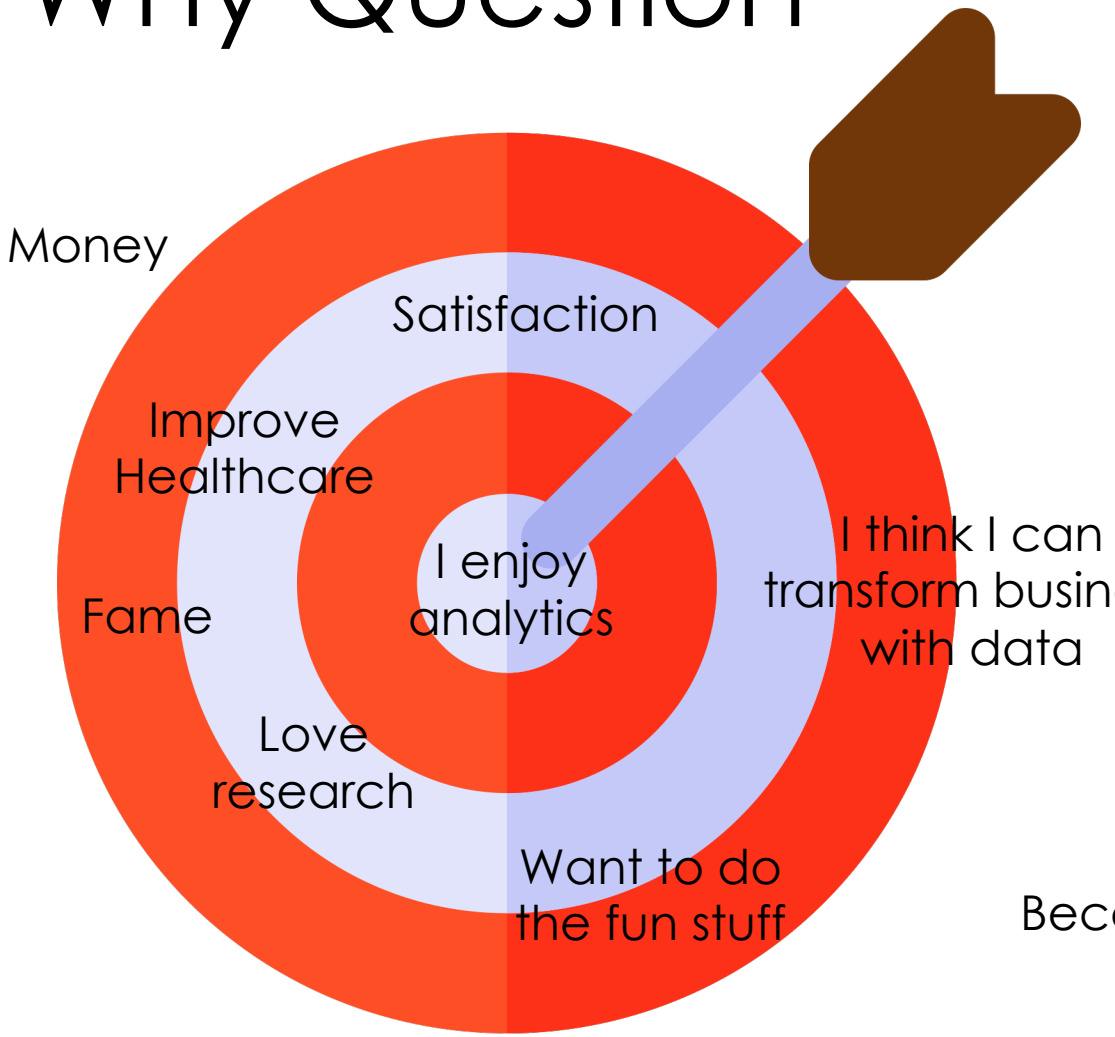
Ask the Why Question



Because everyone is following it

Not sure

No clue but I just want to

Because it is hot

“

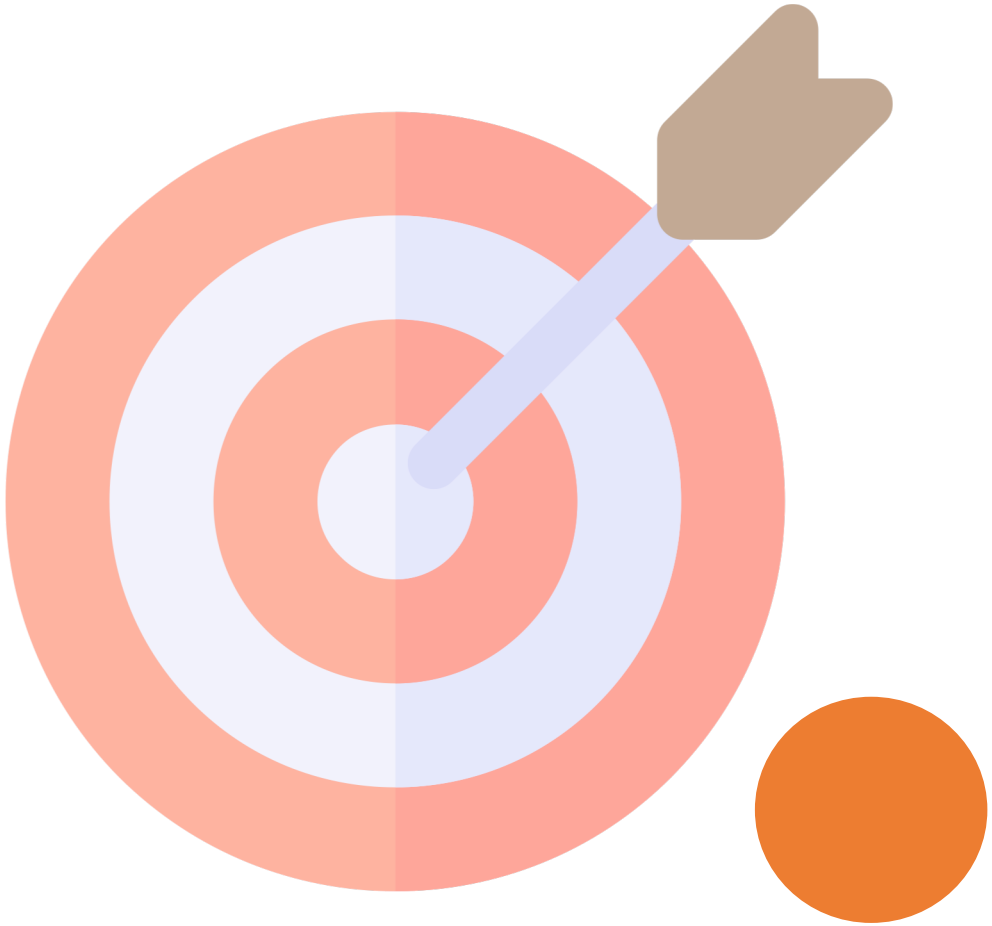
If you want to do machine learning,
be a learning machine

Read, read, read
+ action, action +
attention to details

All the logos are the trademarks of the respective companies

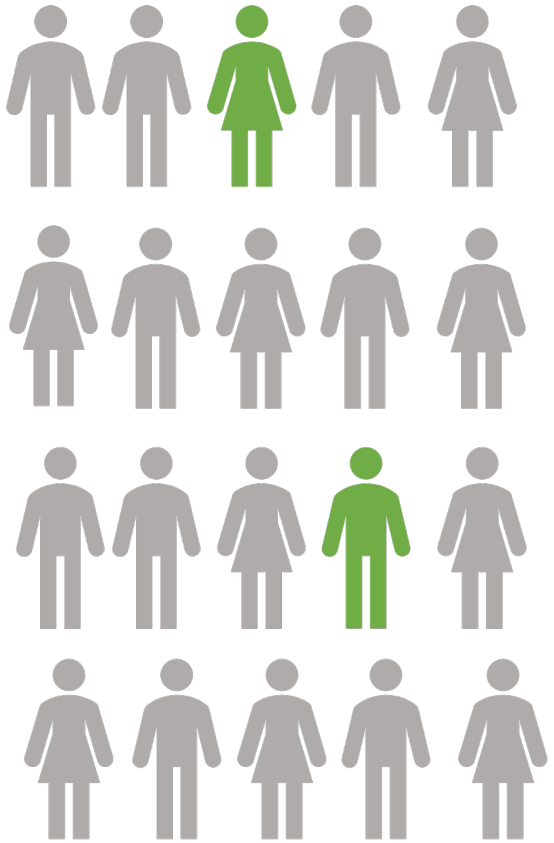
Work towards your Goals

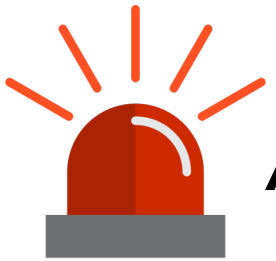
- See 2-3 years forward in time and write the steps to take NOW
- Network with right people, ahead of time (I will share a personal story)



Get hands-on Experience

- When you apply for a position, other 500+ candidates have the exact same profile as yours
- Who gets the job?
  - The one who has network (someone knows him/her **for their work**)
  - Can present <u>demonstrated</u> experience





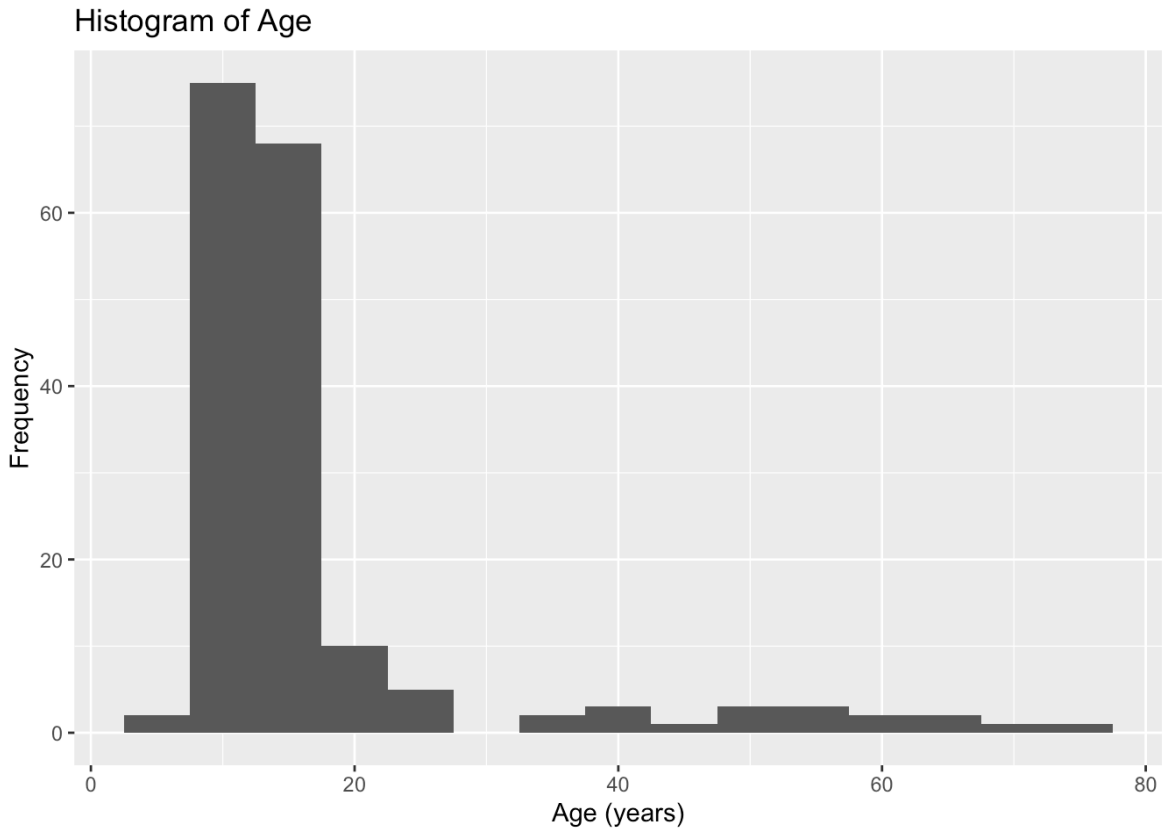
Academia Vs Industry

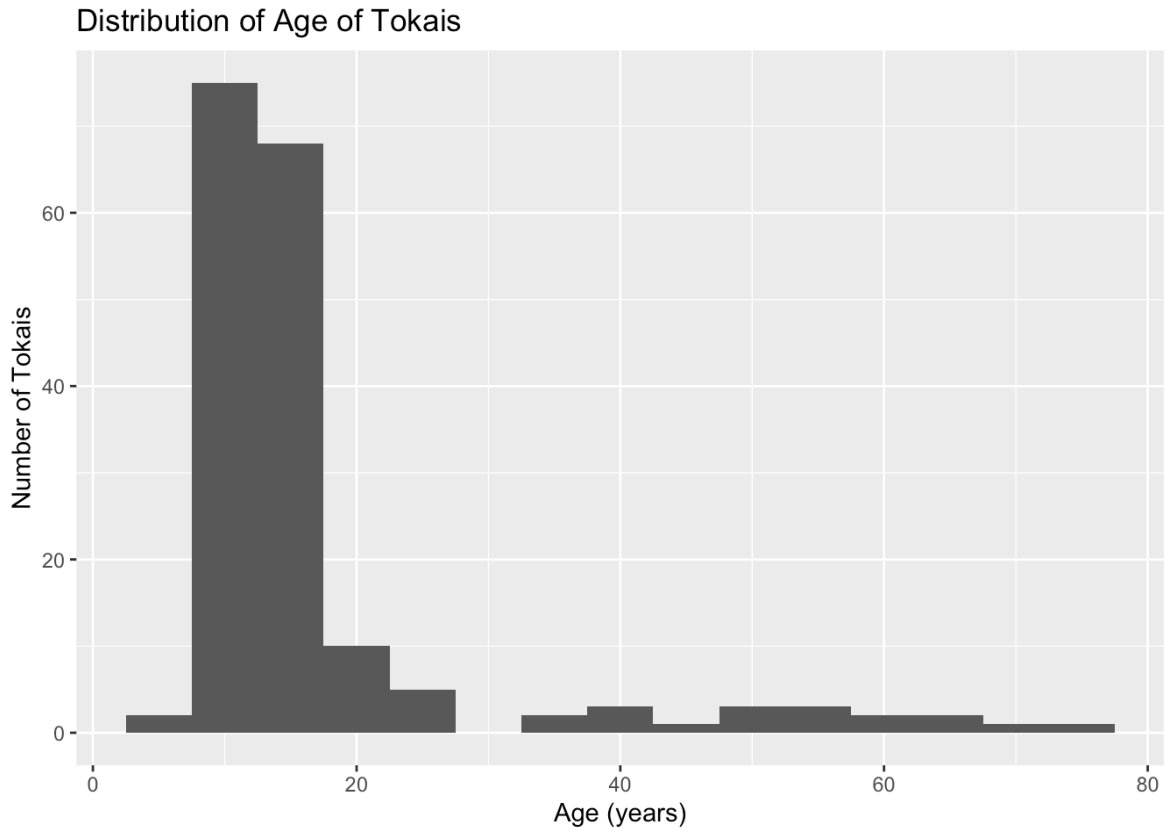
- Work experience in both sides
  - 10+ years in academia
  - 6+ years in industry
- Most of the times, graduates are not prepared to work in the industry without further training
- Part of the reason: a huge disconnect between academia and industry
- There is a paradigm shift happening and the future of academia is subject to transformation (a lot, I think)

Disconnection from Reality

- Academic examples, most of the times, cannot relate to <u>current</u> reality
- Students not updated on topics of interest in the industry
- Students rarely get a change to work with real data
  - Real data is not lovey-dovey data that you see in textbook
  - Real data is

Ways of communication is different





Too broad, No depth

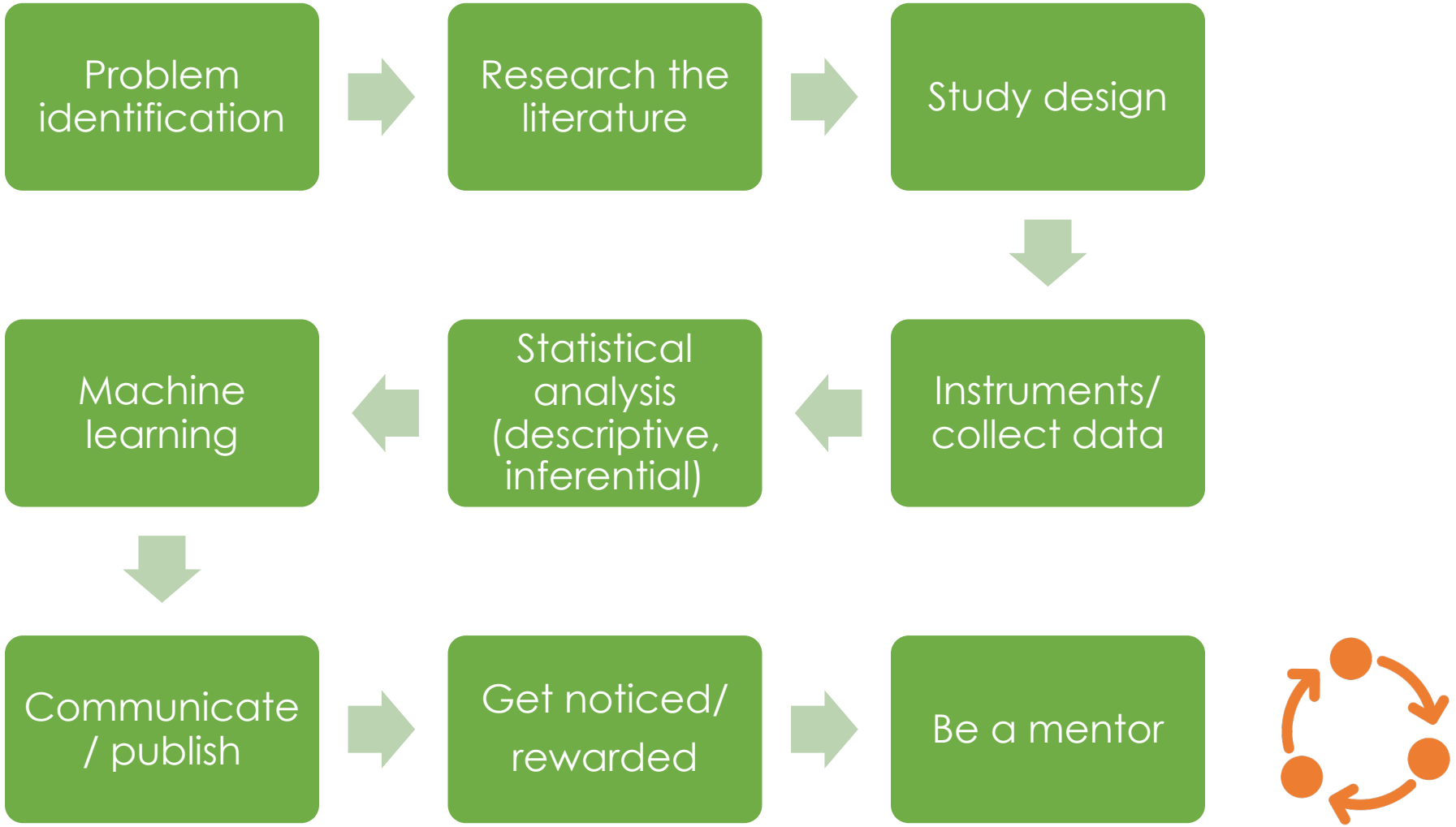
- Familiarity with a lot of topics but no depth on a single one
  - If I ask what was your most important accomplishment– cannot give a reasonable response
  - Sometime they blame the faculties (which is, to some extent, true but this doesn't help at all-- DON'T DO IT)
  - If you blame your department/professors/past manager, they won't hire you

Solutions / Prescriptions

Your Mindset

- Invest in you
- Work on schedule
- Work with a mentor

Path to Success for Statisticians



Volunteer - Internship

YouTube Surgeon

YouTube Engineer

YouTube Lawyer

YouTube Data Scientist

Volunteer at BRF

Who We Are
Biomedical Research Foundation (BRF) is an independent non-profit organization based in Bangladesh

Mission
Improving quality of life through biomedical research

Vision
To establish as an international reputable collaborative research platform

Values
Integrity, collaboration, ethically responsible, transparent and accountable

www.brfbd.org

18 Publications in 2 years

20+ Ongoing projects

Real life problems to work on

Cordial mentoring

Infinite possibilities

Rewards at BRF

First-authored publications
We offer/invite you to take lead on projects backed by our infrastructure. No other organization will do this in Bangladesh.

Develop transferrable expertise
We mentor to develop you as an Applied Statistician/Data Scientist. We've proven record that it works.

Access to diverse resources
Collaborate with researchers with diverse expertise. No need to worry about authorship—we've got policy in place.

Dream big and innovate
Got an idea? Write a proposal. We've got your back.

www.brfbd.org

18 Publications in 2 years

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Real life problems to work on

Cordial mentoring

Infinite possibilities

Win-Win Situation

What you get

- Hands on training on Applied Statistics
- Rewarded with authorship
- Build your resume
- Build your network
- Recommendations for study abroad/jobs

What BRF gets

- BRF builds the workforce
- BRF builds its track record
- Develops future scientist
- BRF builds future leaders
- BRF develops mentors/patrons

Hard Questions – Let's Face them

You Ask	We Answer
Does BRF pay for volunteering?	No
Does BRF pay for internship?	Not currently. But you get the mentorship for free
Is BRF hiring?	We are currently training statisticians to build our Data Science team
How come BRF doesn't pay now?	Because we are not funded yet
How many future opportunities are likely to open?	We estimate to build a team of 50 Data Scientists within the next 3 years
OK, then I cannot volunteer now but will consider when you hire	Thanks, but when the opportunity will come, those we are training will likely be considered first

Skillset BRF is looking for

Person with a good heart

People who are honest

Curiosity

Genuine love for analytics

Willing to learn new software

Applied Statistics / Analytics background

Genuine passion for research

People who are transparent

People comfortable coding in R and Python

Willing to be a mentor

Want to make positive impact on peoples' lives

Willing to work in a team

THANK YOU FOR YOUR ATTENTION

Contact

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Slides
(will be posted later)

Github.com/raheems/icas2019

About BRF

www.brfbd.org

Credits

- Some Icons are made by Freepik https://www.flaticon.com/authors/freepik
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