

# The Hitchhiker's Guide to Technology:

## A Conversation on Careers in Tech

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# Agenda

- ❑ **The Hacker Mindset:** How I pulled off 5 Hackathon wins in 1 year
- ❑ **AI Now:** A Critical Overview of Social and Technical challenges
- ❑ **Creativity and Computer Science:** Why I created a Scientific Comic about Artificial Intelligence
- ❑ **Alice Through the Looking Glass:** What I've learned about the IT Industry

# The Hacker Mindset: My experience

May '18: Graduated college

July '18: Joined Dell

Sept '18: Invoice Correction --- Order Management

Dec '18: Credit Limit Allocation --- Credit/Finance

April '19: Network Security ---- Cyber security

June '19: Ethical Hack of Source code ----- Dev/Ops

July '19: Content Classification----- Marketing

# The Hacker Mindset: Hackathon Lessons

1. Develop business acumen:
  - a. understand the business end to end
  - b. gain experience with building different components of a software product/service
2. Develop design thinking and product management skills:
  - a. Understand your client
  - b. MVP (Minimum viable product+iterate) mindset
3. Work in a high pressure environment
4. Gain familiarity with all stages of SDLC (Software Development Lifecycle)

# The Hacker Mindset: Key Takeaways

- ❑ Take on challenging problems. Learn to work under constraints
- ❑ Take on things you don't know and figure it out as you go
- ❑ Take risks, follow your intuitions
- ❑ Challenge the tradition/ status quo
- ❑ Collaborate, build something bigger than yourself

Questions?

# AI Now: Social and Technical Perspectives

AI Winter -----> AI Summer (Bubble) -----> AI Autumn



Media Hype/ Exaggerated Capabilities

Math washing

Predictions != Policies

Algorithmic Bias

Models cannot survive in the wild

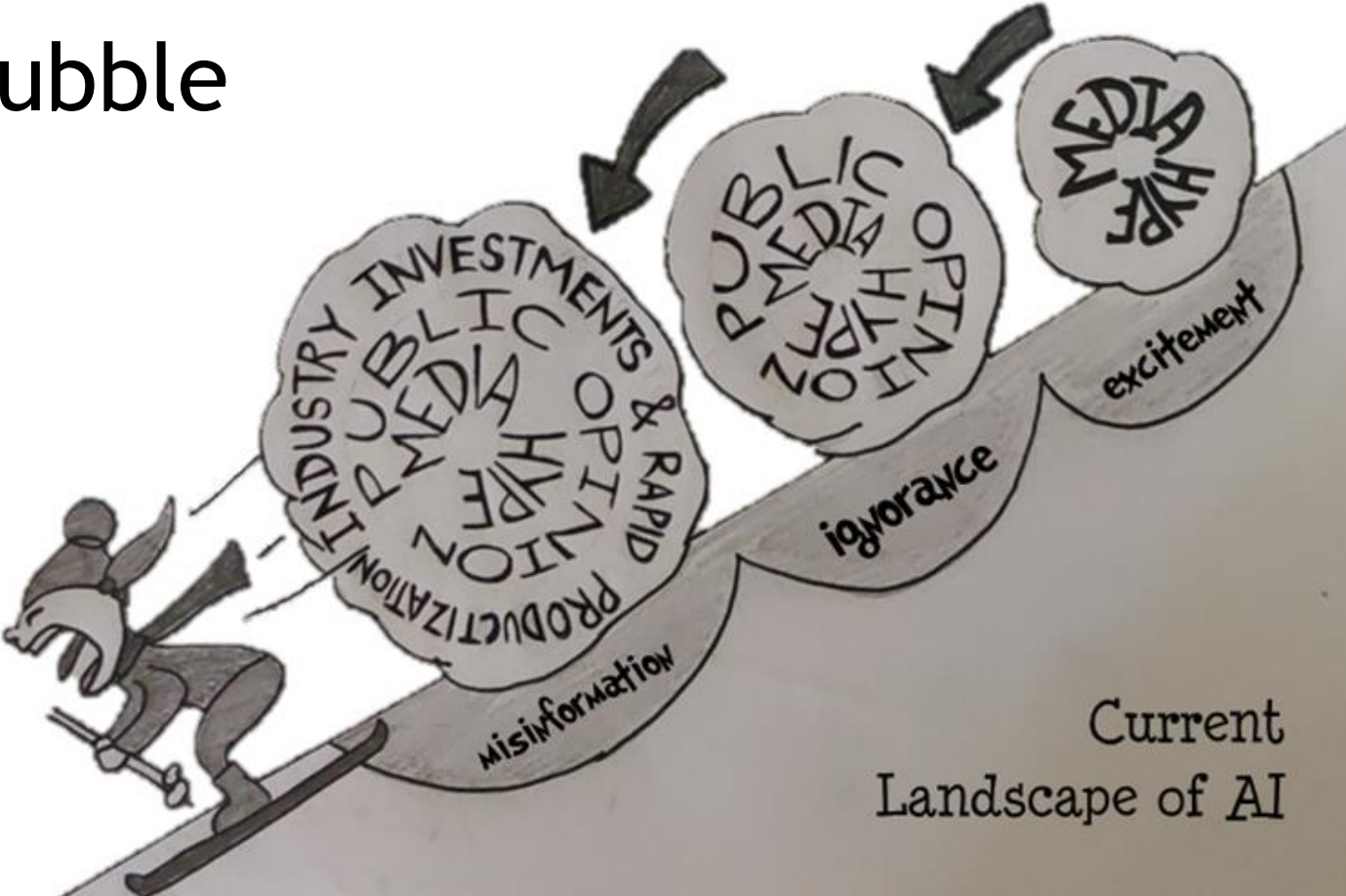
Interpretability

Reproducibility crisis

Fairness, Accountability, Transparency

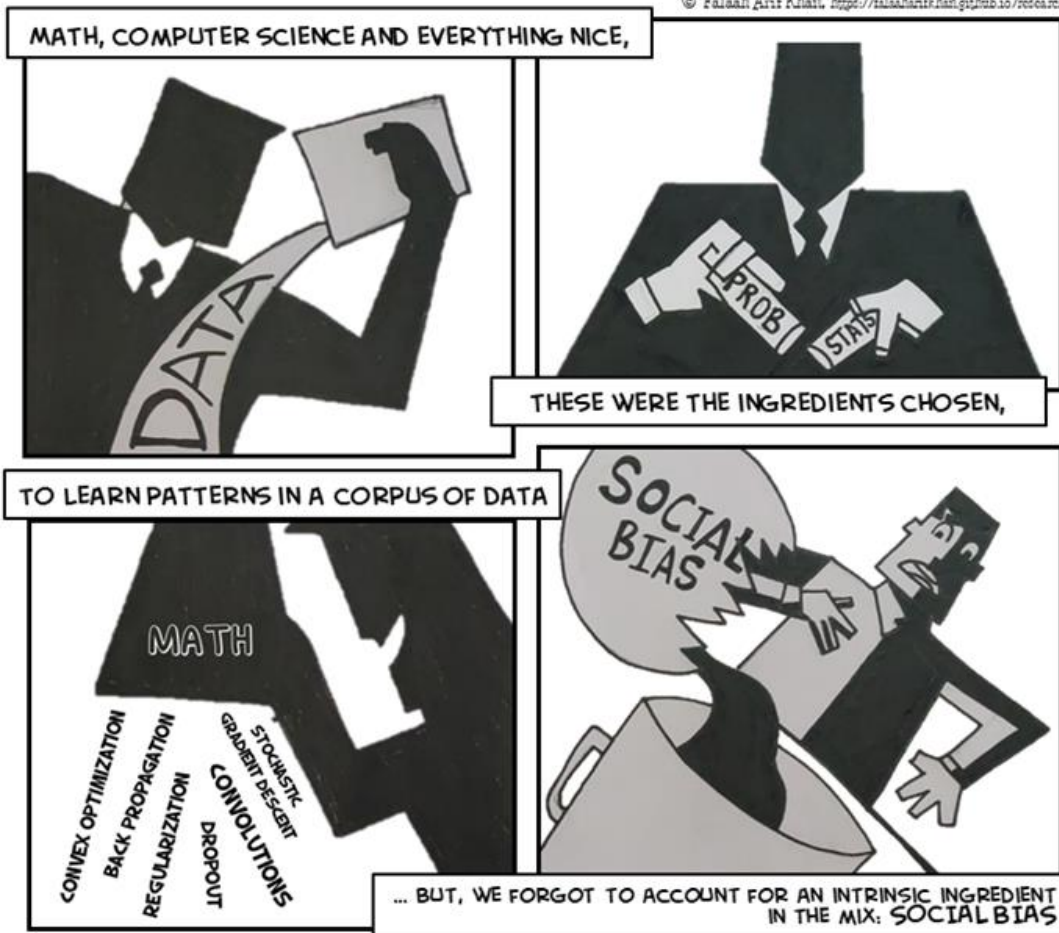
Publishing incentives, gold rush mentality

# AI Bubble





# Algorithmic Bias



# AI Now: Industry/Research Prospects

- ❑ High quality information, easy to use tools has removed the barrier for entry
- ❑ Being able to train at model to SOTA metrics no longer ‘good enough’
- ❑ Publishing has become extremely competitive
- ❑ Emergence of a wide variety of interesting sub fields and application areas

Eg: FAccT (Fairness Accountability Transparency)

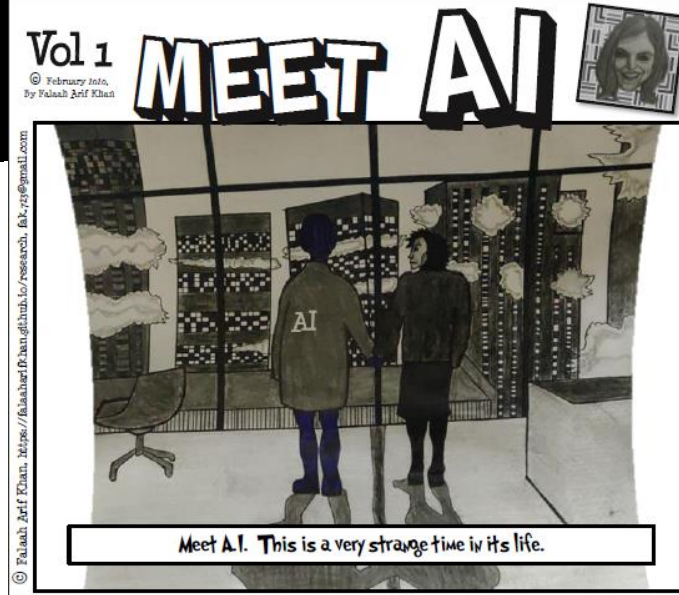
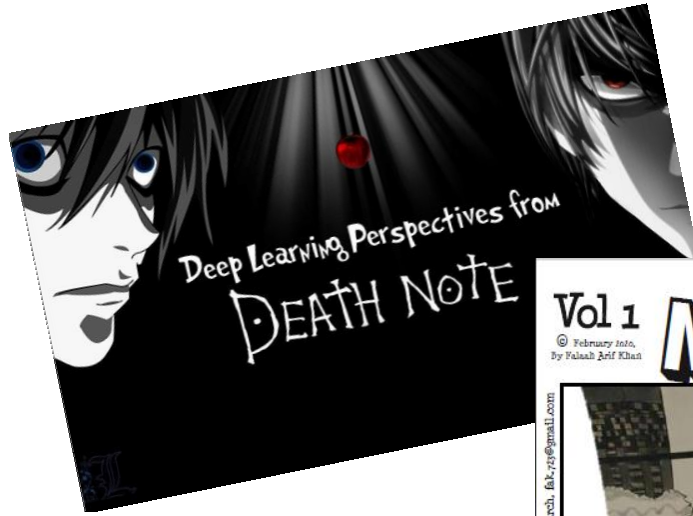
HCI (Human-Computer Interaction) / Human-centered AI

AI for Games, AI dungeon master

- ❑ Preference for non-traditional backgrounds, unique perspectives
- Eg: Data efficient learning, social justice, etc

Questions?

# Creativity and Computer Science: My experience



# Creativity and Computer Science

- > Build/ create interesting things
- > Develop your unique perspective, specific products end up having wide appeal
- > Think critically, software is not built in isolation
- > Strengthen your voice/PoV, become an independent thinker
- > Enable creative networking!

Questions?

# Alice Through the Looking Glass: IT Industry

- > You are not limited by your role
- > Reach out; people love talking about their work
- > The industry loves ‘innovation’
- > Company culture is important
- > Volunteer as much as possible

# Friendly Advice (Things I wish I had done sooner)

- > Look at your dream career's prerequisites as soon as you realize it
- > Be very skeptical of buzz/ hype
- > Get as much varied experience as possible
- > Read/ Consume the right content (audiobooks, newsletters, podcasts)
- > Know where your people are (for ML: Twitter, Reddit)
- > Use your unique experiences as a differentiator





# The Hitchhiker's Guide to Technology

**Speaker:** Falaah Arif Khan

## **Speaker Profile:**

Falaah ArifKhan is a Research Engineer at Dell EMC, Bangalore where she designs and builds data-driven models for Identity and Access Management. She has worked on the detection of malicious behavior in login activity and on the formulation of suitable responses to malicious requests, in the form of Reverse Turing Tests, Multi Factor Authentication mechanisms and the strategic placement of Honeypots. Falaah's research interests span Data science, robust Machine learning, and the social impact of AI (what is also called "AI Anthropology.")

At Dell, Falaah holds the title of "youngest patent holder" and has been awarded the coveted "Game Changer Award" for outstanding innovation in the security space. She has also won a slew of hackathons and other awards.

Falaah has a BTech in Electronics and Communication Engineering from Shiv Nadar University and will be heading to New York University's Center for Data Science in Fall 2020 to pursue a Masters in Data Science

# The Hitchhiker's Guide to Technology

## Overview:

In this talk we explore the composite skills and experiences that have shaped the speaker's career in tech- from creative problem solving and the hacker mindset, to asking the important question of “should I build this product” before asking the prevailing question of “can I build this product”, to the use of art as a medium for discourse around the most pressing problems in Tech- in the hope that under a sea of interesting and offbeat experiences we can find a few key takeaways to help the audience navigate their own unique careers.

## Agenda:

- ❑ **The Hacker Mindset:** How I pulled off 5 Hackathon wins in 1 year
- ❑ **Tech Ethics:** Why I believe that building Technology entails so much more than just Engineering
- ❑ **Creativity and Computer Science:** Why I created a Scientific Comic about Artificial Intelligence
- ❑ **Alice Through the Looking Glass:** What I've learned about the IT Industry