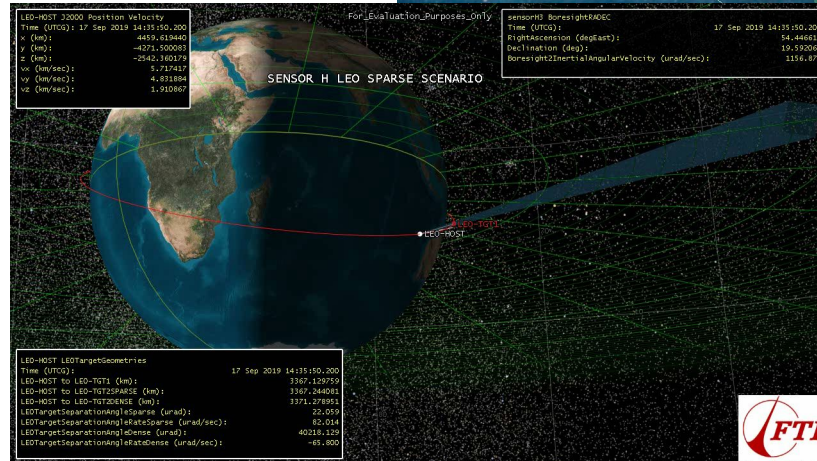
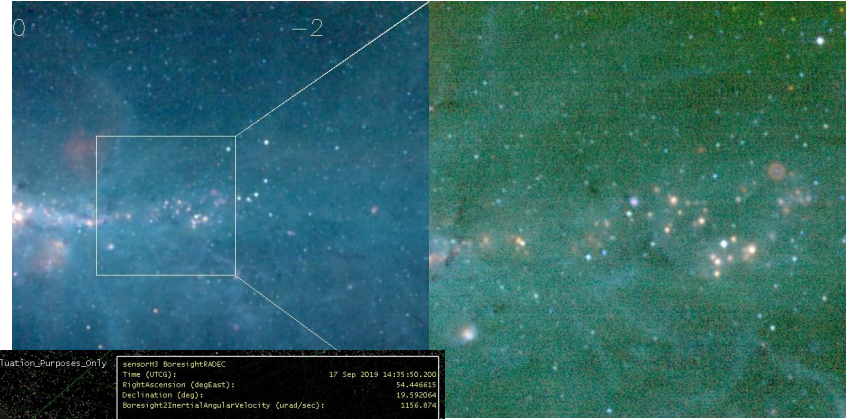


# Bachelor's Degree Career in Science and Technology

Sheela Ahmed

# About Me

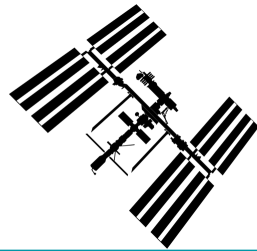
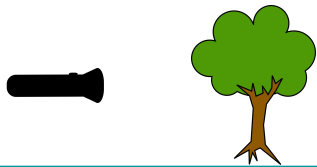
- ❖ Associate Data Scientist at Frontier Technology Inc. in Beverly, MA
  - Algorithm development
  - Simulate space imagery using stellar background and star catalogs, some of which created by NASA



# What is Imaging Science?

~understand and studying the design and development of scientific imaging systems~

- ❖ Combining *math, physics, computer science, and engineering* to study every *aspect* of an imaging system, from how light is perceived to how sensors are produced to how images are processed
- ❖ The Imaging Chain:



Light Source Perception → Object → Propagation/Collection → Detector/Sensor → Processing → Compression/Storage → Display

# What is Imaging Science?

Astronomy

Cultural Heritage Imaging

Detectors and Imaging Systems

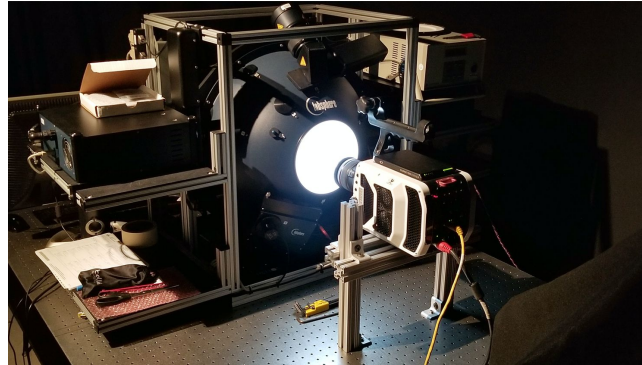
Human and Computer Vision

Remote Sensing

NanolImaging

Magnetic Resonance

Optical Imaging



# How I Got Here

## Interest in math and science

Physics and Astronomy - Holy Quran, Surah Adh-Dhariyat 51:48 about the expansion of the universe

Surah Al-Anbiya 21:31 about the start of the universe and the first step to creation

51:48 وَالسَّمَاءَ بَنَيْنَاهَا بِأَيْدٍ وَإِنَّا لَمُوسِعُونَ\*

And the heaven We built with *Our own* powers (*aydin*) and indeed We go on expanding it (*musi'un*).<sup>1</sup>

أَوَلَمْ يَرَ الَّذِينَ كَفَرُوا أَنَّ السَّمَوَاتِ وَالْأَرْضَ كَانَتَا رَتْقًا فَفَتَقْنَاهُمَا\*  
وَجَعَلْنَا مِنَ الْمَاءِ كُلَّ شَيْءٍ حَيٍّ أَفَلَا يُؤْمِنُونَ\* 21:31

Do not the unbelievers see that the heavens and the earth were a closed-up *mass (ratqan)*, then We clove them asunder (*fataqna*)? And We made from water every living thing. Will they not then believe?<sup>2</sup>

# Why Science and Technology?

So many opportunities!

- With just a Bachelor's

Hazrat Khalifatul Masih V<sup>aba</sup>: set the Nobel Prize as the *minimum* target

It is the “bounden duty of every Muslim - man and woman - to acquire knowledge”

- Holy Prophet<sup>saw</sup>



Everything is Allah's creation

# Being a [Ahmadi] Woman in the field of Science

- ❖ Nobel prize

- Only 10 women have been awarded the Nobel Prize in Physics or Chemistry

- 
- ❖ Advised by Huzur to pursue a career in the sciences - end goal being a Nobel Prize
  - ❖ Approaching a career in the sciences is not incongruous to our roles as Ahmadi women

# Biggest Takeaways

- ❖ A Bachelors of Science degree is the path to further education - You can still have successful career with it
- ❖ As an ahmadi woman, it is still possible, continue to pursue knowledge just as we have been advised to do as Muslims

JazakAllah!