

Getting Started As A Researcher

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About Me

- Doctoral Researcher and Academic Support Mentor at Loughborough University, UK
- Research Interests: Beamforming Antennas, Antenna Arrays, Dielectric Lenses, Metamaterials, Frequency Selective Surfaces, Leaky Wave Antennas.
- Freelance RF Designer and Career Consultant
- STEM Promoter and an active volunteer for IEEE and several other organizations.

General house rules

- Please keep yourself muted, unless you have something to say, or have a question to ask,
- It won't be just me talking, but we will try to learn from each other's experiences,
- Throw in your questions in chat, and I will get to them as soon as I can!

REMEMBER, EVEN THE DUMBEST QUESTION CAN BE LIFE CHANGING
SOMETIMES... SO DO ASK!

About today...



WHO

is a Researcher?



HOW

to get started?



WHERE

can it take you?

Who?

researcher

noun [C]

UK  /rɪˈsɜːtʃə/ US 



someone whose job is to study a subject carefully, especially in order to discover new information or understand the subject better:

- *She is a **leading researcher** in the field.*

(Definition of *researcher* from the [Cambridge Business English Dictionary](#) © Cambridge University Press)

The inherent purpose of a researcher is to explore *why* and integrate that into *how* it can be used to make lives easier...

A Step-by-Step Guide to Research!

Identify the *problem/question* that needs to be answered

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Read and Build Understanding

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Read and Build Understanding

- Identify keywords related to the question,
- Look for articles, papers, standards, etc. to follow up with the recent developments,
 - Number of resources available from IEEE such as IEEE Xplore, IEEE Collaboratec, IEEE Standards Association, etc.
- Meet new people, attend conferences, discuss the question with people around you, even the dumbest of discussions can lead to great ideas! *(Perfect Example: Check out Silicon Valley S01E08 or just search for Silicon Valley Middle Out on YouTube)*

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Hypothesis – An idea or a prospective solution

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Experimental Verification – The Final Test

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Hypothesis – An idea or a prospective solution

Experimental Verification – The Final Test

Present – It's more of a responsibility than reward

Research – How to get started!

Some general tips!

- Make **reading** a habit,
 - Read about whatever interests you the most.



IEEE Xplore[®]
Digital Library

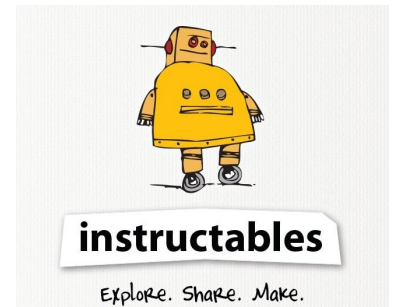
IEEE SA
STANDARDS
ASSOCIATION



IEEE LearningNetwork[™]

Some general tips!

- Start **learning** things on your own
- Look out for a number of **resources available online** for free





Some general tips!

- Practice, test your theories, run your own experiments, fail and learn from failed experiments!
- Most of the initial research/experimentation can be done using free resources and simulation tools. Look out for such options, or just e-mail the company asking for a student edition or an evaluation version.

Some general tips!

- Meet people around, do talk and not just listen, but ask questions!

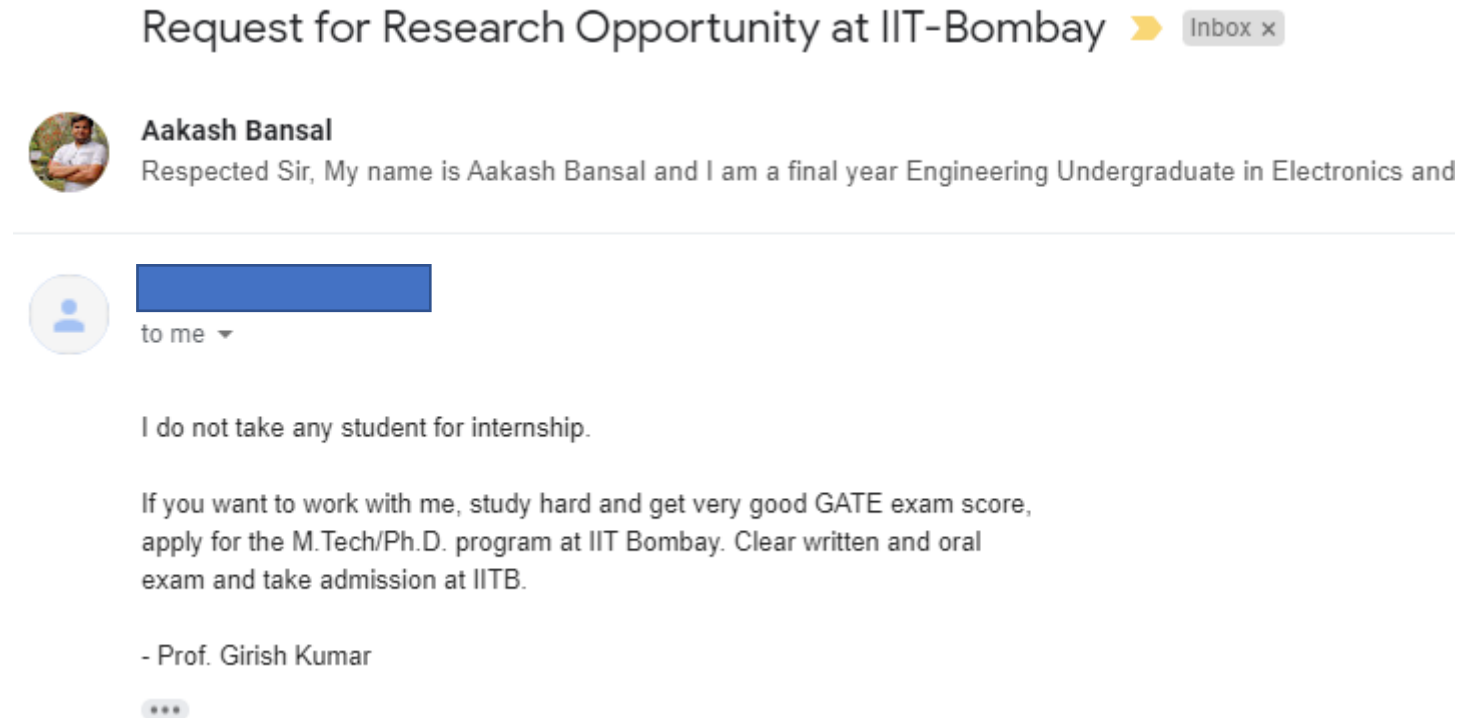


Some general tips!

- Understand the importance of cold e-mailing (NOT SPAMMING)!

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Vishnu Srivastava

to Vinod, S.A., me ▾

Dear Aakash,

I will be most happy if you join me for 6 months as student trainee.

You need to apply to Dr S Ali Akbar, Head-Training Cell, CEERI with a copy to Sh Vinod through your college for his approval.

With best wishes,

Dr Vishnu Srivastava

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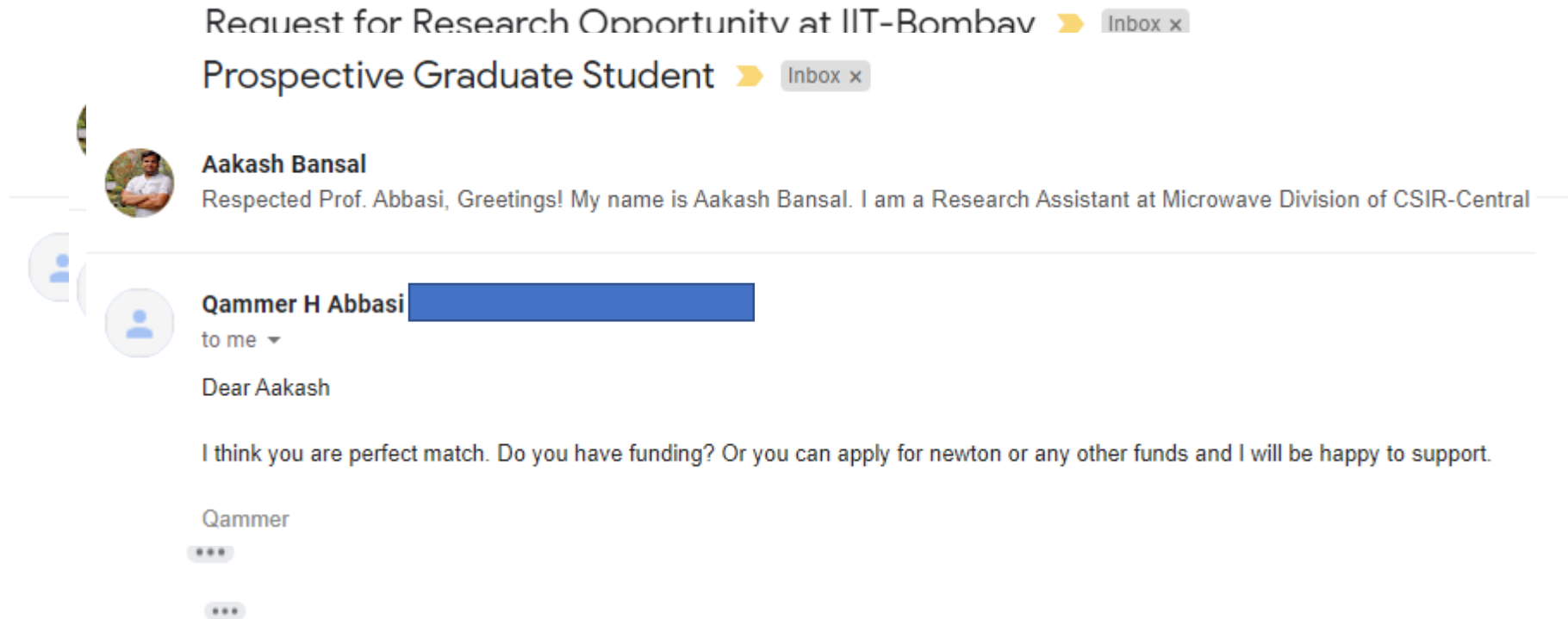
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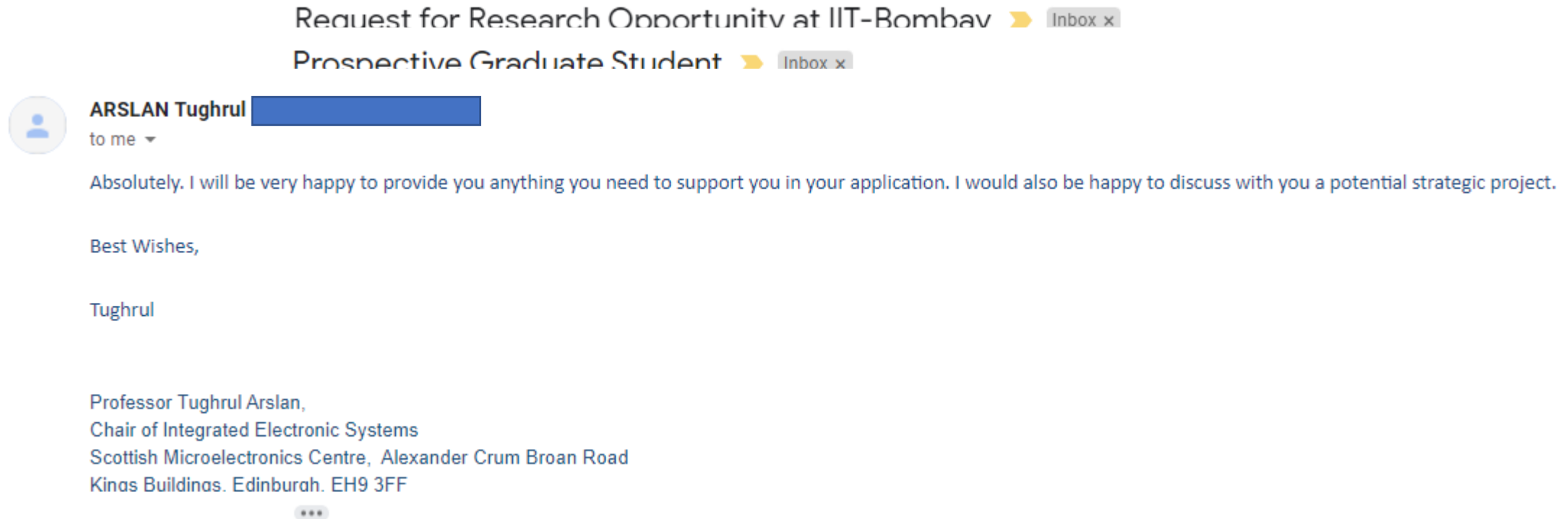
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Prospective Student Fall 2018 - Request for Information Regarding MSc Program

**Aakash Bansal**
Respected Professor Paoloni, I am applying to the Department of Engineering, Lancaster University for M.Sc. Program in Electronics |

**Paoloni, Claudio** 
to me ▼
Dear Bansai,

I am very pleased of your interest. You have a very good CV.
You can surely have a project for the Dissertation with my group in the frame of the MSc.

Looking forward to meeting you.

Best wishes

Claudio

potential strategic project.

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Prospective Student Fall 2018 - Request for Information Regarding MSc Program



Stephen Hanham

to me ▾

Hi Aakash,

Thank you very much for your email. From your resume, it looks like you have a lot of relevant experience in the microwave and terahertz bands. Your research projects also sound very interest

I currently have two PhD positions open in my group:

- 1) Integrated Antenna Arrays for Future Terahertz Systems (<https://www.findaphd.com/search/ProjectDetails.aspx?PJID=98081>)
- 2) Terahertz Sensing with Trapped Electromagnetic Fields (<https://www.findaphd.com/search/ProjectDetails.aspx?PJID=97697>)

However, we could also discuss a custom PhD project around microstrip patch or graphene antennas as you suggested. We would need to discuss ways that we could advance the state-of-the-a

If you are interested I would encourage you to apply at <https://sits.bham.ac.uk/pages/EPS019.htm> putting me down as the supervisor and a temporary PhD title such as Advanced Antenna Arr;

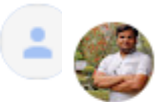
Regards,

Stephen.

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Expression of Interest for Transdisciplinary Framework for 5G Networks and Beyond > Inbox x



Aakash Bansal

Hi there, I recently came to know about the new Industrial Connections Program, and I wished to express my interest for the same. By the introduction, my name i



Purva Rajkotia

to me ▾

Thanks Aakash

You will be a good addition to the group,

I will include you in the mailing list. We will have meeting soon,

thanks

Purva

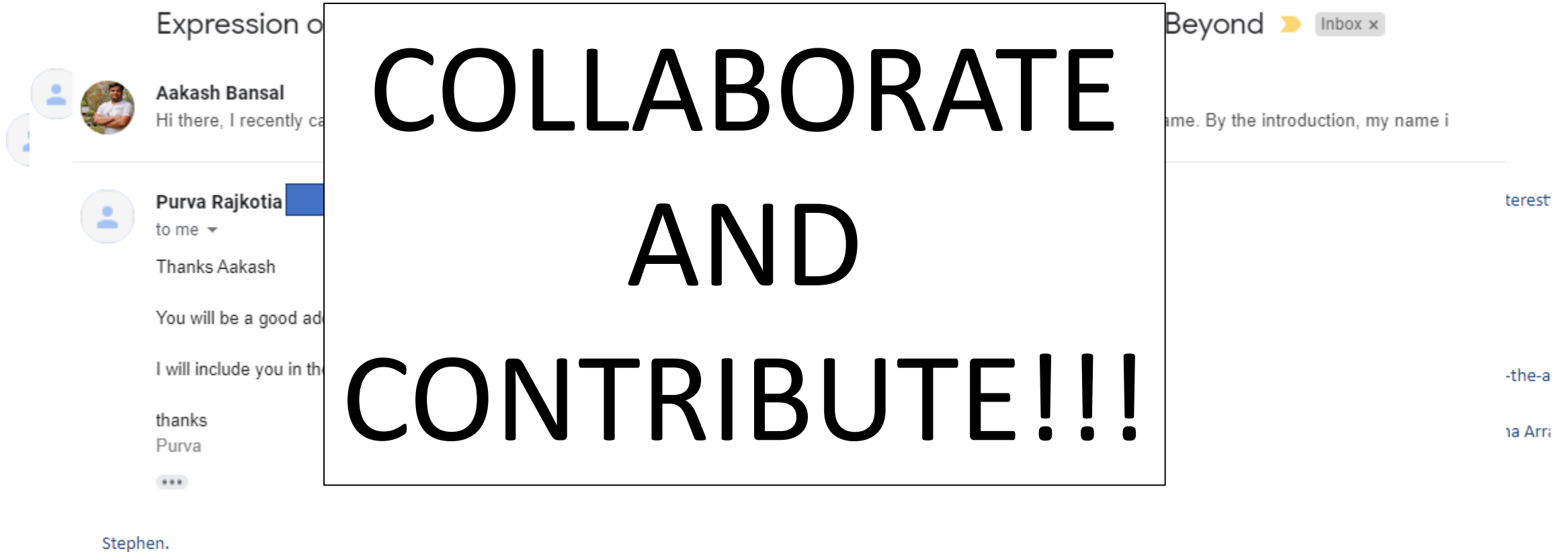


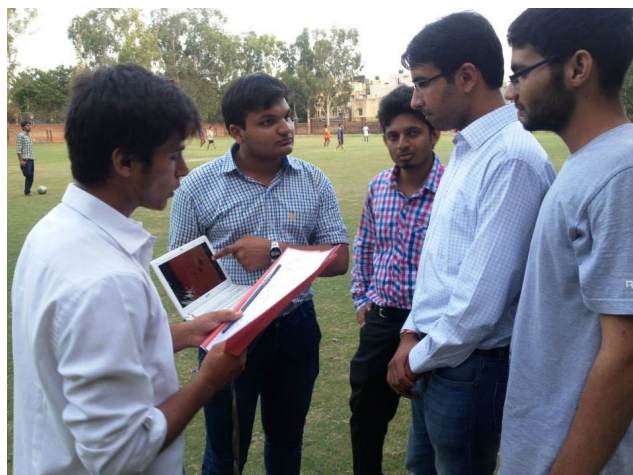
Stephen.

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**COLLABORATE
AND
CONTRIBUTE!!!**





Some general tips!

- Learn to present your work!
 - Write and Publish
 - Stand in front of an audience and present
 - Build examples to make it easier for people to understand!

Where will it take you?



Academia

Where will it take you?



Academia



Industry

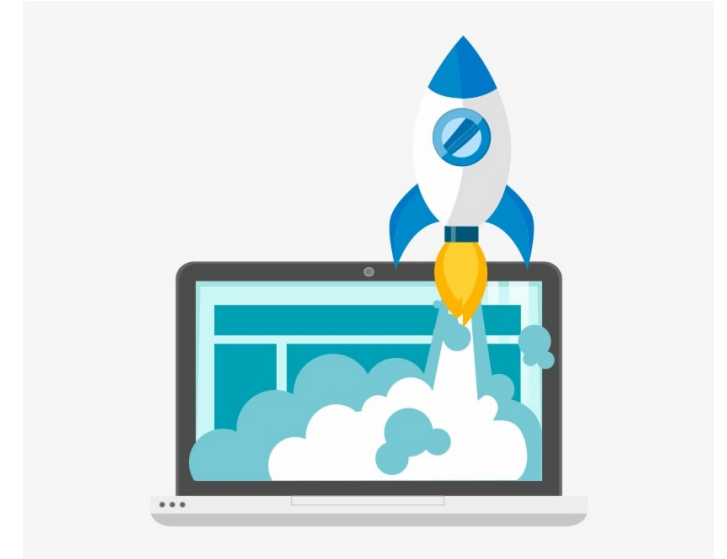
Where will it take you?



Academia



Industry



Entrepreneurship

Thank you! Let's talk!

Feel free to reach out,

 / bansalaakash

 / ibansalab

 / ibansalab

 [*www.bansalab.me*](http://www.bansalab.me)

