

QUBITNEPAL: QUANTUM COMPUTING NEPAL (QCN)

We Dream "Quantum Computing in Nepal".

Current State: Forming Team + Exploring Quantum Computing Together (With Discussion Series/ Real time Quantum Computing Series)+ Encouraging other to join QCN

Moral Ground: Science Communication in Nepal!

Long Term Goal: Quantum Computing Workforce Preparation in Nepal + (more)

WHO WE ARE?

Physics/Mathematics/Chemistry/cs Graduates/Teachers interested in Quantum Computing!

SABIN THAPA



- PhD Physics Candidate @Kent State University, USA
- BSc Physics, ASCOL, Nepal
- Research interest in HEP Theory (QFT/QCD) + QC Enthusiast

RAJAN BHATTARAI



- PhD Physics Candidate @University of Kentucky, Lx, USA
- BSc Physics, ASCOL, Nepal
- Research interest in high energy physics (particle/experimental) + QC Enthusiast

ASHOK BHANDARI



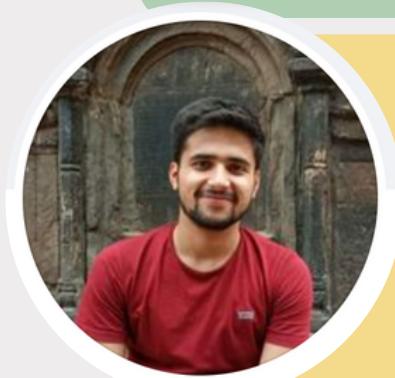
- Medical Physics Resident, University of Nebraska Medical Center, USA
- MS Medical Physics (Creighton University, USA) + MS Physics (UNR, USA)
- BSc Trichandra Campus, Nepal

MANISH KHANAL



- PhD Physics Candidate @University of Utah, USA
- BSc Physics, ASCOL , Nepal
- Research work in Neutrino Particle Physics + QC Enthusiast

ROSHAN KANDEL



- PhD Physics Candidate @UTA, USA
- BSc Physics (TriChandra Campus, Nepal)
- Research work in high energy/particle physics (theory) + QC Enthusiast

SUMAN KHATRI



- Physics student at Ascol
- Quantum computing, QFT,ML/DL/AI

ROSHAN KHATRI



- PhD Chemistry Candidate, Kent State University, USA
- BSc + MSc Chemistry, TU, Nepal
- Research work in Quantum Chemistry + QC Enthusiast

SUNIL TIMILSINA



- Incoming PhD Physics 2024 Fall, Ohio University, USA
- BSc + MSc Physics, TU, Nepal
- Theoretical Condensed Matter Physics + QC Enthusiast

GUNA NIDHI POUDEL



- MSc Physics, TU, Nepal
- BSc Physics, ASCOL, Nepal
- Research interest in computational condensed matter + quantum chemistry + quantum computing.

(WELCOME TO JOIN: CONTRIBUTE AND LEARN...)

Science Career & Graduate Application:

Weekly Meet - Series I

May - 06, 2023 (9 pm to 10 pm - Nepal Time)

What to do after High School/BSc/MSc/Other?

Free!!! Online!!!
Register here:
<https://forms.gle/3wF2yRQLNDnsFir69>

QUANTUM COMPUTING IN Nepal!
 First Real Time Quantum Computing Series - I
 (for beginner: no requirement!!!)

Who can do science?
 Everyone! -who isn't a "nature lover"?
 Do you love nature but don't like "mathematics/science"?
 It's not your problem!

Maybe you are *not used/taught to or not trying to connect "science" with the "nature"!*

Graduate Application

APPLYING TO GRAD SCHOOL [THE ULTIMATE GUIDE]

Good if done by December!
 \$\$_save\$\$

Contact:
 university,
 professors,
 scholars,
 research labs!

Application Materials

Passport

BSc (4 Yr) / MSc [3 GPA minimum]

English:
 TOEFL/IELTS/Other

Recommended: (mostly)
 GRE, GRE Physics

CV/Resume**

SOP**

LOR

Most deadlines (Fall)
 December 15
 January 15
 February 15
 (at max March/April)
Depends on Uni!!!!

Application Submission

Fill Graduate Application: Carefully!
 ★ Personal information
 ★ Education/Academic
 ★ Desired Course/Program
 ★ Starting Sem
 ★ F1 visa (international student grad application)
 ★ SOP/LOR/CV/Other

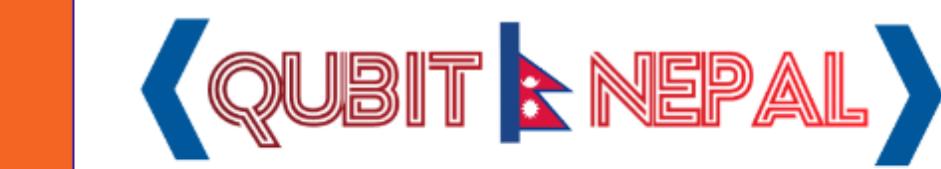
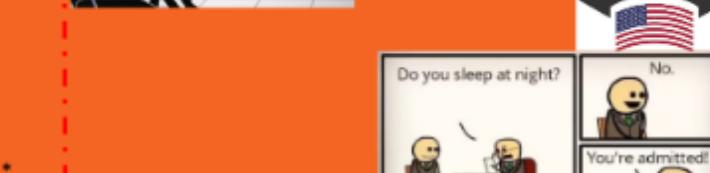
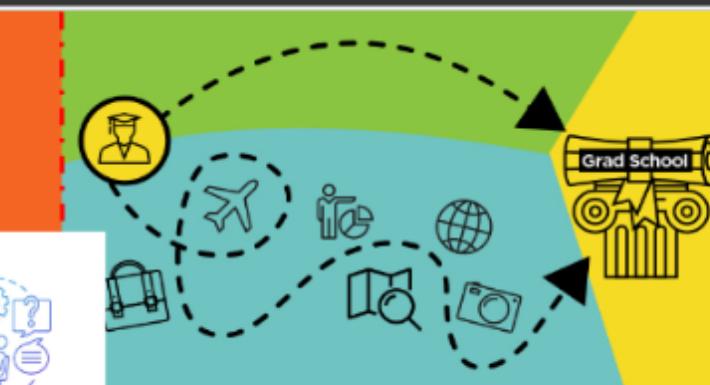
Fall 2024 (Fall Semester)
 (starts from August)
 Communication or Follow Up Email!!!!

By March
 But Depends!
 Careful Work!!

Application Decision

Submit Now
 Follow up!
 Interview Preparation

Request i-20***
 DS-160***
 SEVIS Fee***
 Visa Application Interview Date***



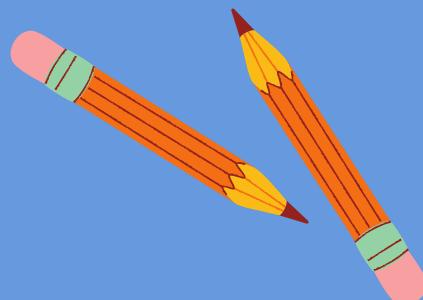
By,
Sabin Thapa

PhD Physics Candidate (2019 -) @Kent State University, USA

(Research in High Energy Physics + Exploring Quantum Computing)

BSc Physics - ASCOL Graduate (2014-2018), Kathmandu, Nepal

OUTLINE



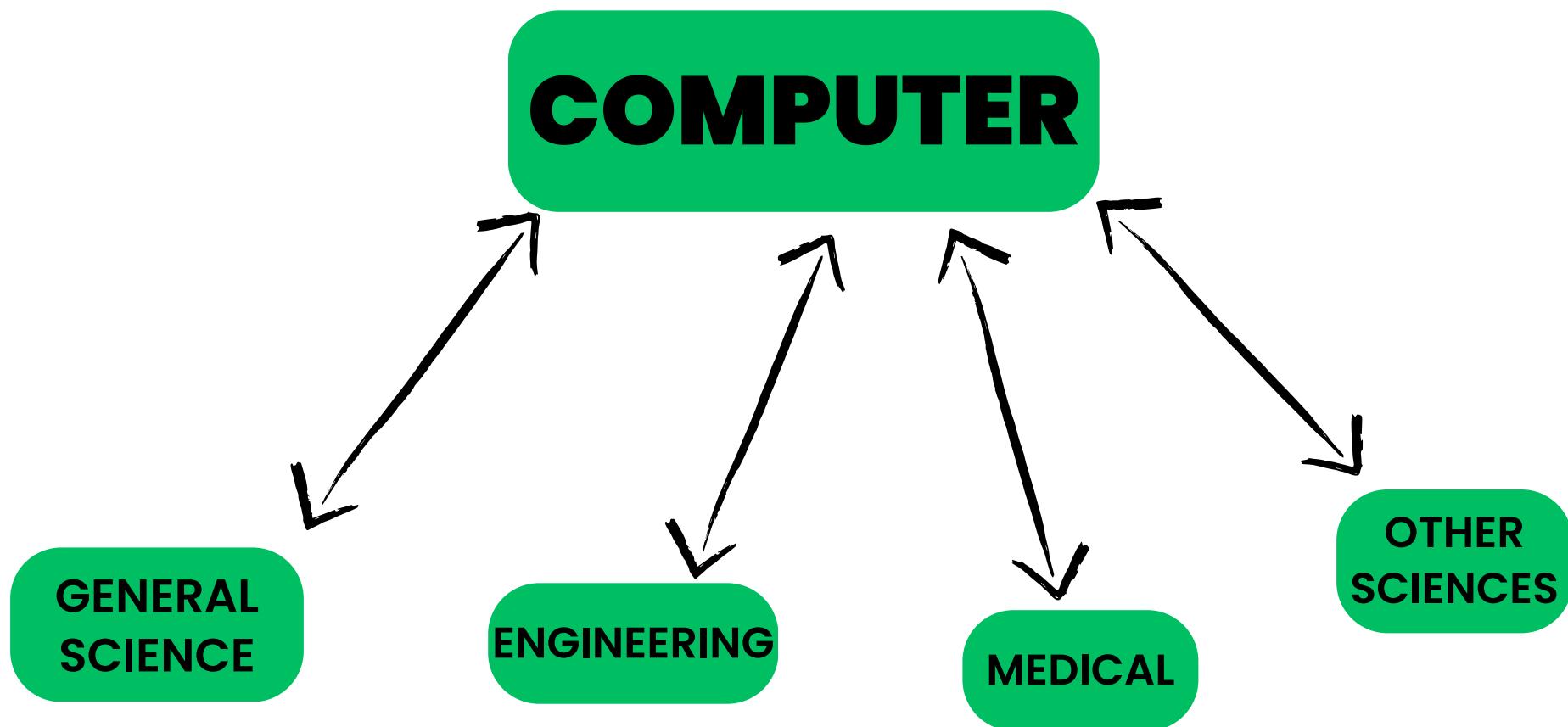
Intro to Quantum Computing
(OVERVIEW)

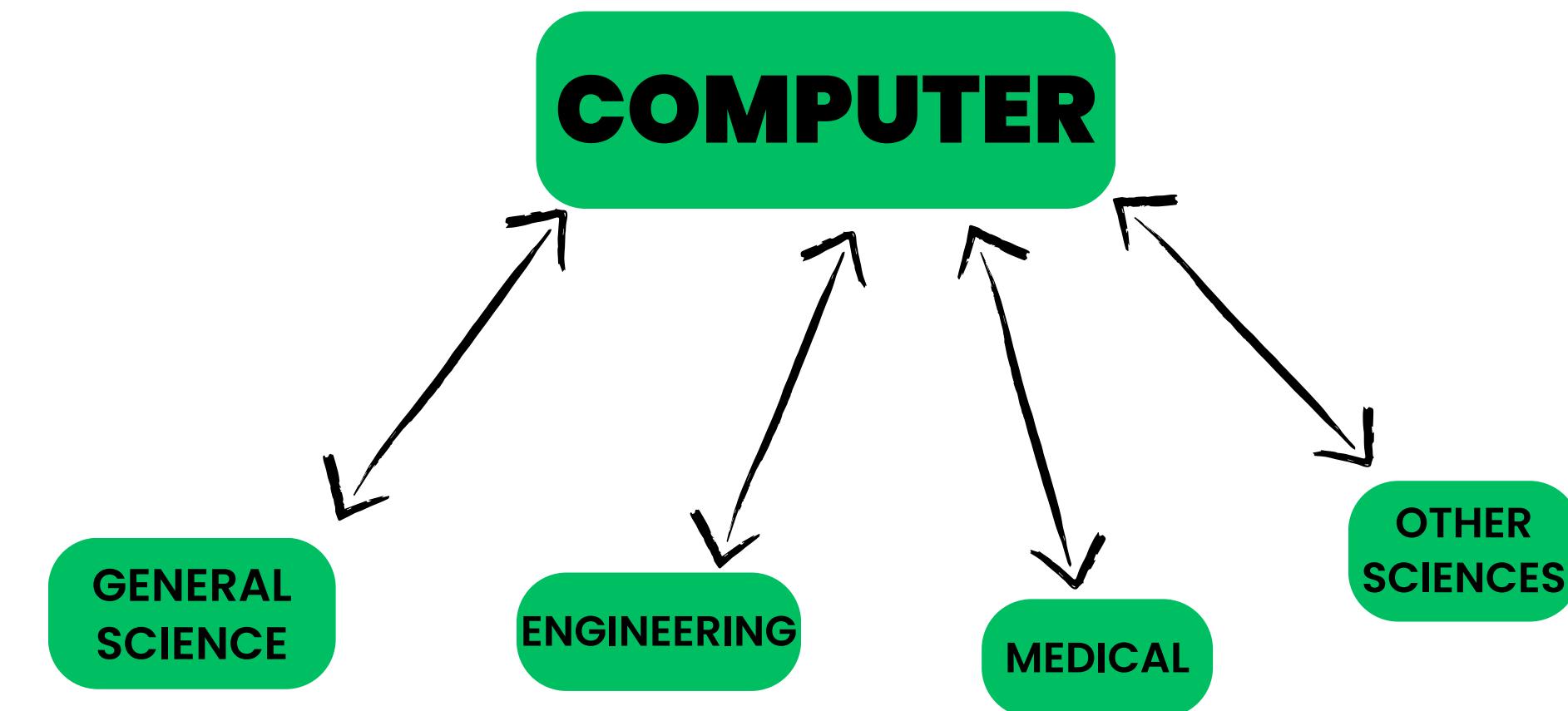
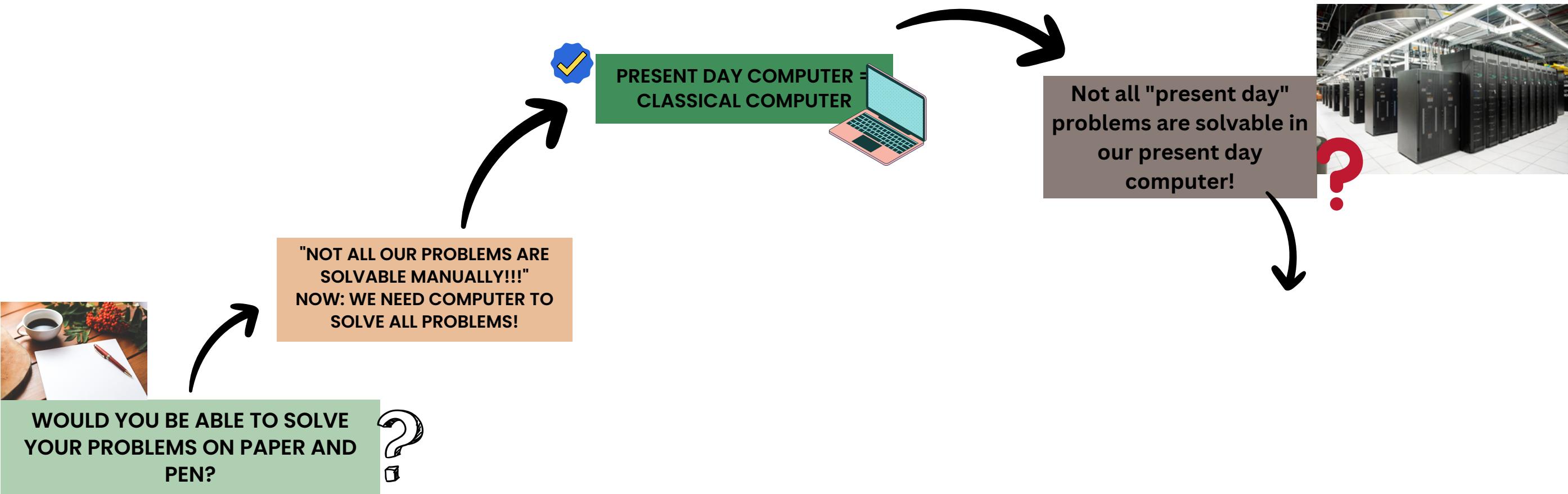
Hands-On tutorial
(Lecture 1)

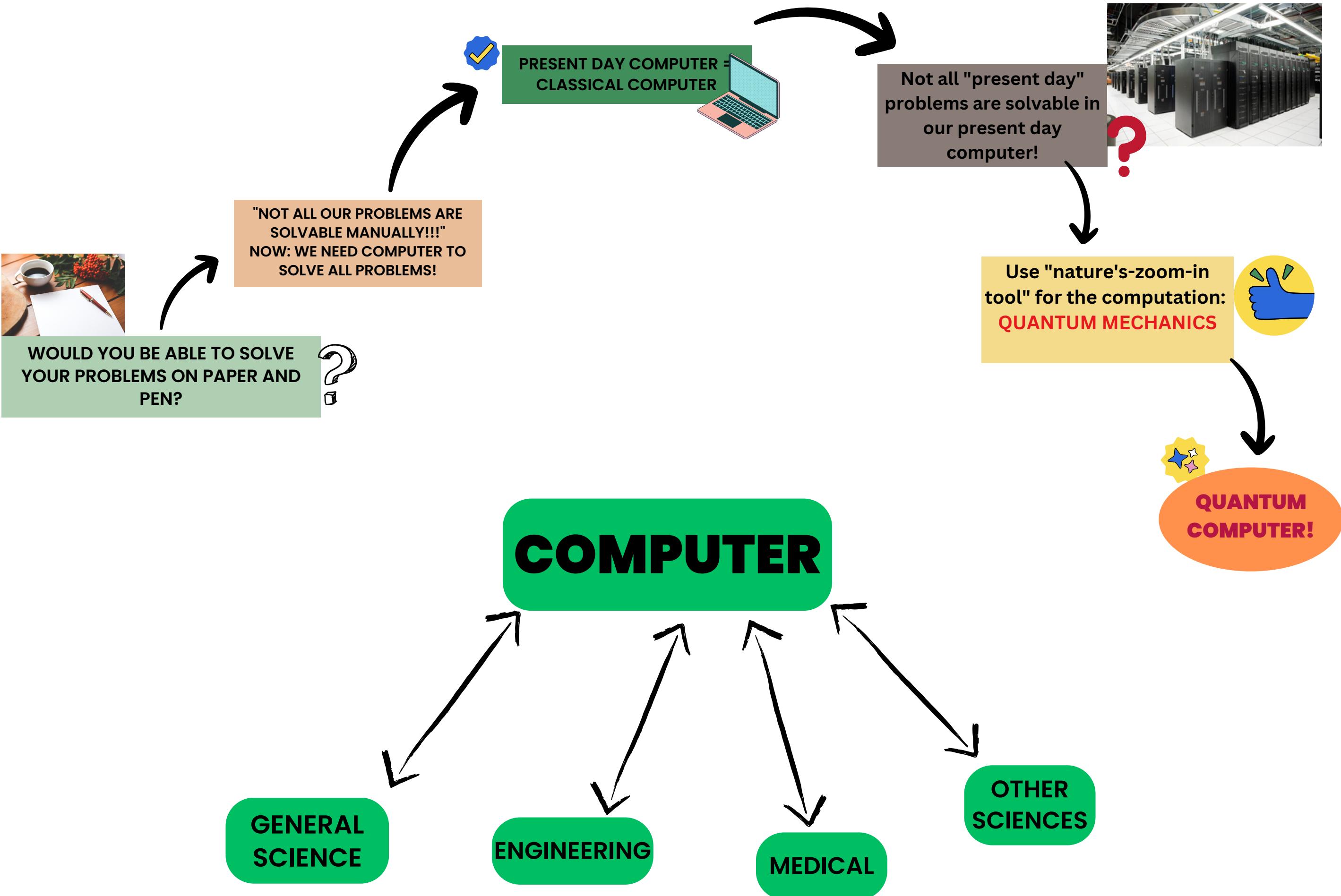
What TO DO After
BSc/MSC/Other?

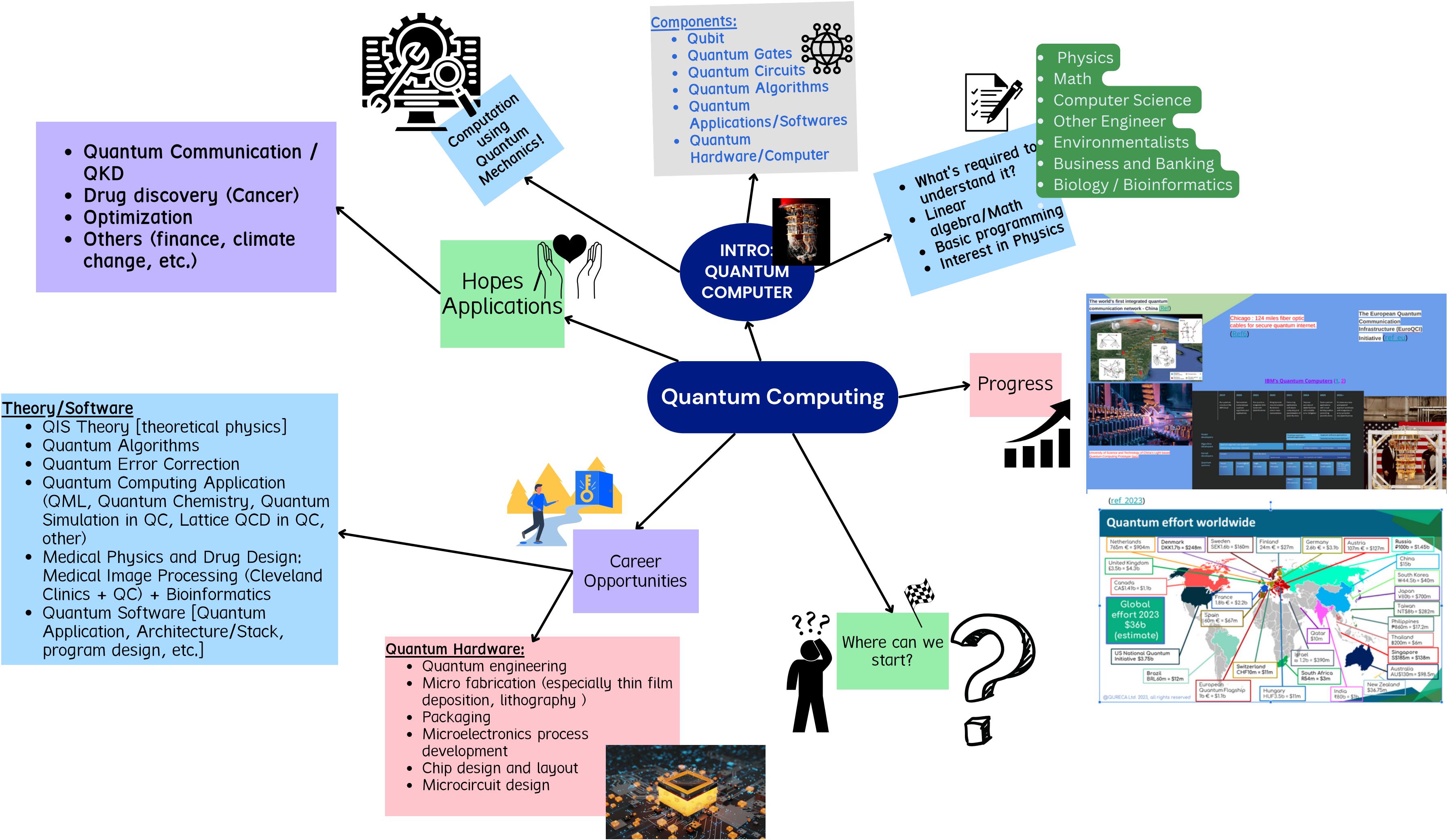
Graduate application:
Step 1

INTRO









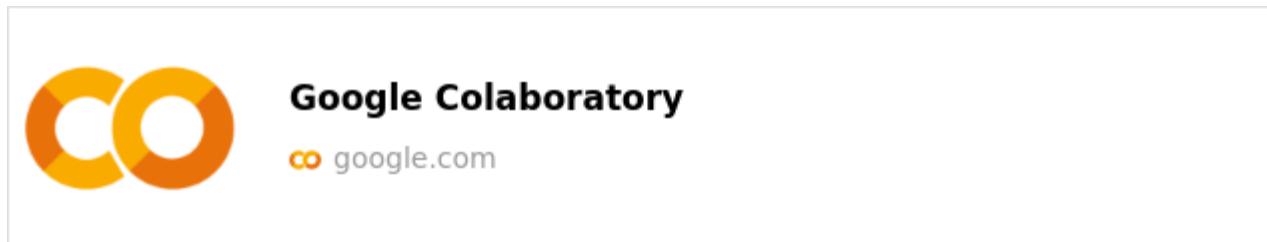
NEXT 

WHERE TO START DOING QC?

OUR WEEKLY MEETING SERIES: WEEKENDS

HANDS-ON TUTORIAL: QUANTUM COMPUTING WITH QISKit (LECTURE 1)

HANDS-ON TUTORIAL: QUANTUM COMPUTING WITH QISKIT (LECTURE 1)



[HTTPS://COLAB.RESEARCH.GOOGLE.COM/](https://colab.research.google.com/)

- LOG IN
- FOLLOW TUTORIAL

Welcome To Colaboratory

File Edit View Insert Runtime Tools Help

New notebook Open notebook Upload notebook

Save a copy in Drive Save a copy as a GitHub Gist Save a copy in GitHub

Save Download Print

Welcome to Colab!

You're already familiar with Colab, check out this video to learn about interactive tables, the executed code history view, and the command palette.

What is Colab?

Colab, or "Colaboratory", allows you to write and execute Python in your browser, with:

- Zero configuration required
- Access to GPUs free of charge
- Easy sharing

Whether you're a student, a data scientist or an AI researcher, Colab can make your work easier. Watch [Introduction to Colab](#) to learn more, or just get started below!

Getting started

The document you are reading is not a static web page, but an interactive environment called a **Colab notebook** that lets you write and execute code.

For example, here is a **code cell** with a short Python script that computes a value, stores it in a variable, and prints the result:

```
[ ] seconds_in_a_day = 24 * 60 * 60
seconds_in_a_day
86400
```

[HTTPS://QUANTUM-COMPUTING.IBM.COM/](https://quantum-computing.ibm.com/)

- CREATE ACCOUNT/LOG IN
- FOLLOW TUTORIAL

Welcome, Sabin Thapa

Graphically build circuits with IBM Quantum Composer

Develop quantum experiments in IBM Quantum Lab

Jump back in:

- Dynamic_circuit
- My first circuit
- QC_practice/Quantum_Teleportation
- QubitxQubit-Intro to QC/Lab...

API token ⓘ

View account details

Launch Composer

Launch Lab

Optimize circuit execution with Qiskit Runtime programs

2 Primitive programs 5 Prototype programs

Run on circuits & programs via IBM Quantum compute resources

View all

Recent jobs

0 Pending 9 Completed

No pending jobs

Your systems: 8 Your simulators: 5 Reservable systems: 0

FOLLOW MORE: REAL TIME QC TUTORIAL!

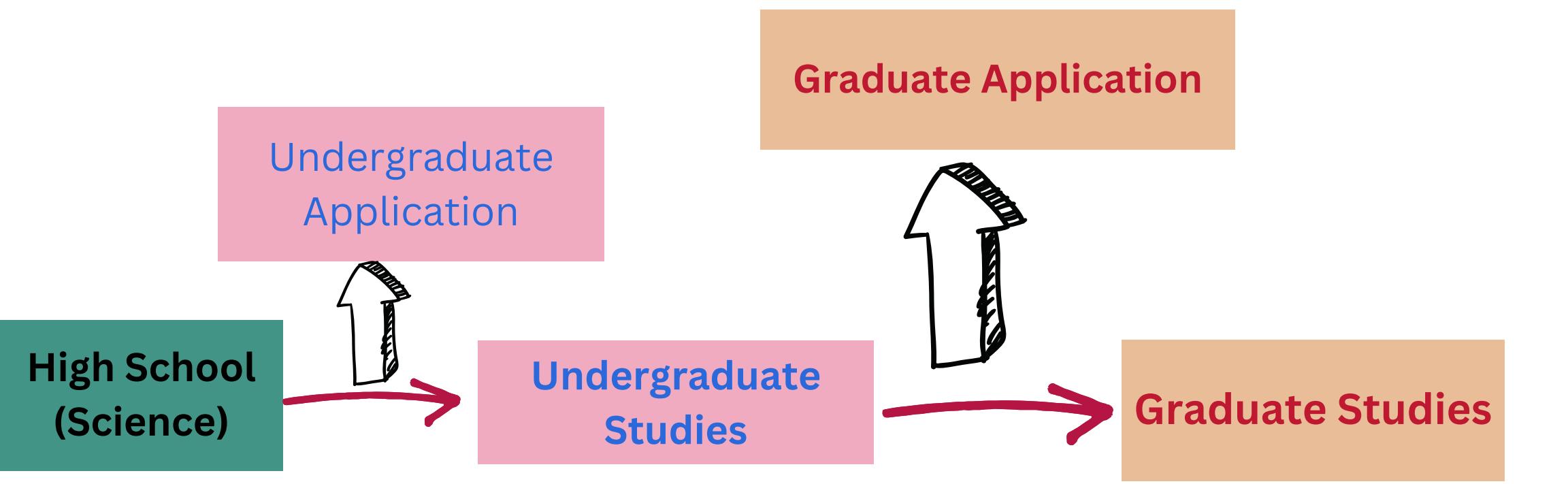
TUTORIAL 1:

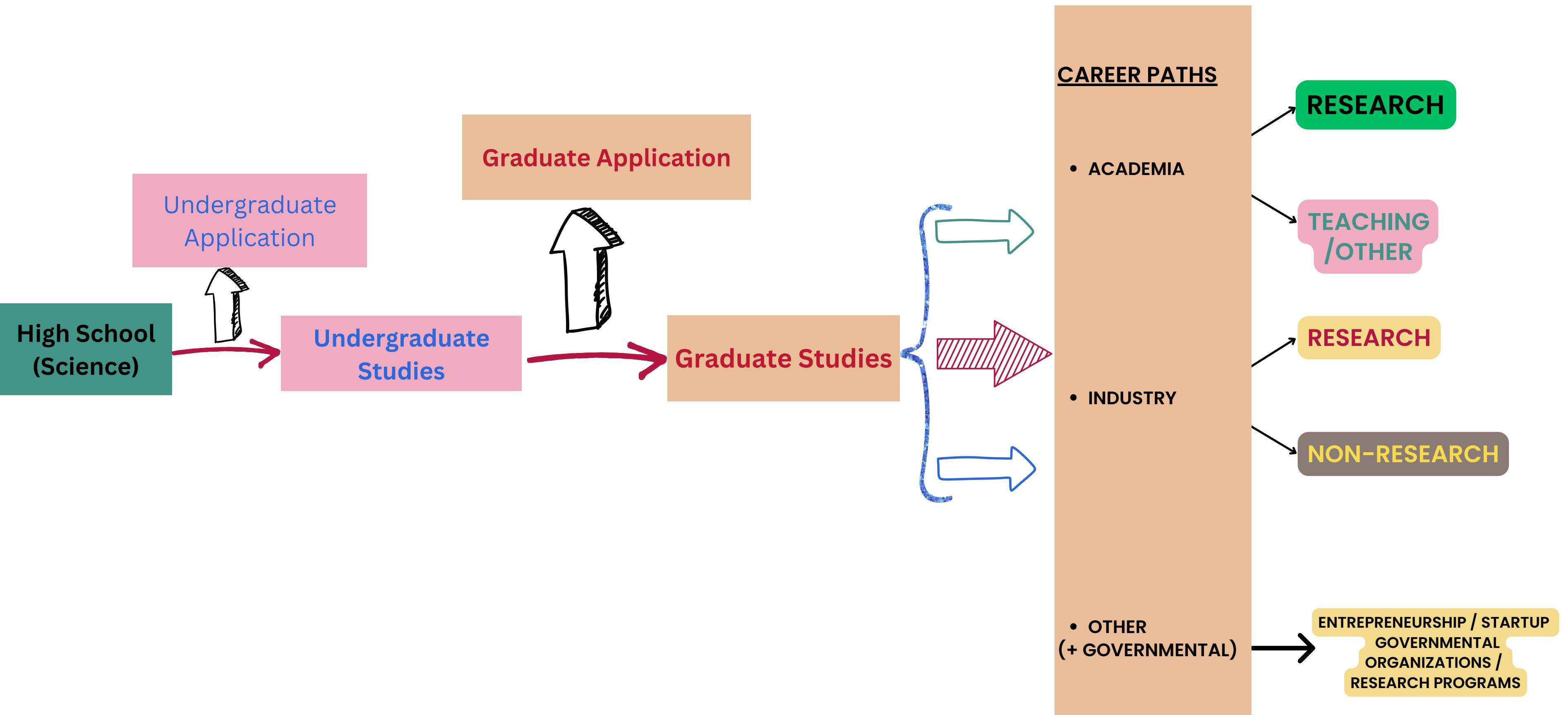
- 1. CREATE ONLINE ACCOUNT IN GOOGLE COLAB OR IBM QUANTUM COMPUTING.**
- 2. YOU CAN CREATE JUPYTER NOTEBOOK IN THOSE PLATFORMS, AND ALSO UPLOAD THE NOTEBOOKS!**
- 3. FOR NOW, UPLOAD THE **"WEEKLY SERIES – HANDS-ON TIME QC TUTORIAL-I.IPYNB"** INTO ANY OF THOSE PLATFORMS (CHOOSE THE GOOD ONE! – BASED ON YOUR DEVICE, INTERNET AND INTEREST).**

NEXT ➤

WHAT TO DO AFTER BSC/MSC/OTHER?







HOW CAN YOU BE PREPARED NOW?

READINESS FOR GRAD SCHOOL APPLICATION – RESEARCH AND STUDIES /CAREER!!!!

WHAT IS YOUR INTEREST OF WORK/CAREER PLAN?

WHAT IS YOUR RESEARCH INTEREST?

MAYBE YOU ARE MISSING SOMETHING OR ARE UNKNOWN ABOUT THE OPPORTUNITIES?

MENTALLY PREPARED TO DO PHD (SCIENCE + RESEARCH)?

SO, WHAT TO DO
AFTER GRADUATION /
NOW?

EXPLORE YOUR
HOBBIES

- CODING - QC?
- TALKING/COMMUNICATING
- TEACHING
- READING
- OTHER (HUMAN-FACTOR)



EXPLORE YOUR
RESEARCH
INTEREST

- BE UPDATED WITH THE "STATE-OF-THE-ART" IN YOUR FIELD OF INTEREST

updates

BE OPEN TO
LEARNING NEW



- (DO NOT STOP STUDYING)
- COURSERA, EDX, KHANACADEMY, UDEMY, OTHERS?
 - RESEARCH TALKS?
 - GROUP-PARTICIPATION
 - COMMUNICATION
 - CONNECTION



CHERISH YOUR
ACHIEVEMENTS!



ENJOY
LIFE!

SO, WHAT TO DO
AFTER GRADUATION /
NOW?

ENJOY
LIFE!



CHERISH YOUR
ACHIEVEMENTS!



- REWIND BACK TO YOUR PAST (ACADEMIC/NON-ACADEMIC) AND ORGANIZE THOSE [REAL/ONLINE]!
- EG.: PROGRESS FROM HIGH SCHOOL TO UG, UG TO GRAD, TEACHING (EXP+AWARDS), VOLUNTEERING/OTHER
- HOW'VE YOU SHAPED YOURSELF TO BE "TODAY'S YOU"?

EXPLORE YOUR
HOBBIES

- CODING - QC?
- TALKING/COMMUNICATING
- TEACHING
- READING
- OTHER (HUMAN-FACTOR)



EXPLORE YOUR
RESEARCH
INTEREST

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updates

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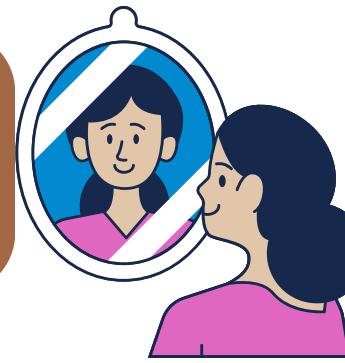


SOFT SKILLS

TECH/
HARD
SKILLS

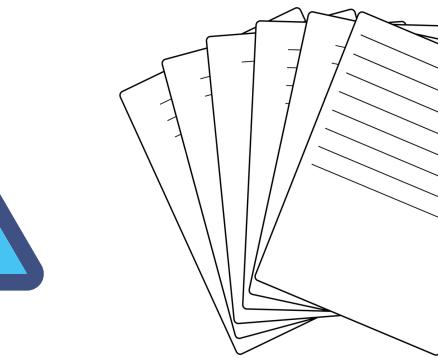
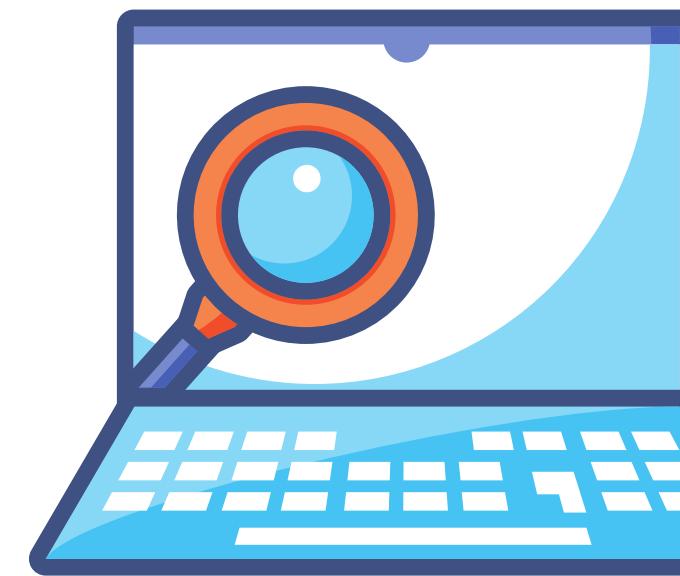
UNIVERSITY
(RE)SEARCH

SELF-
EXPLORATION

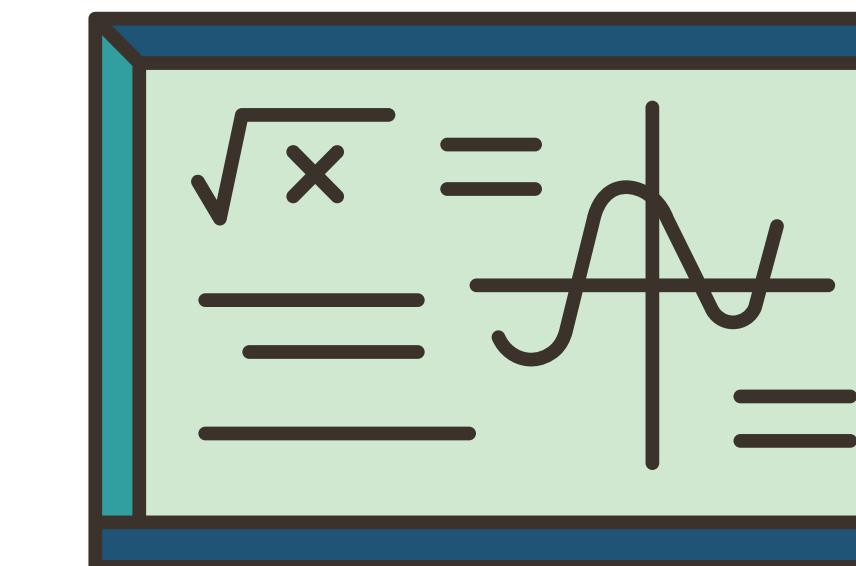
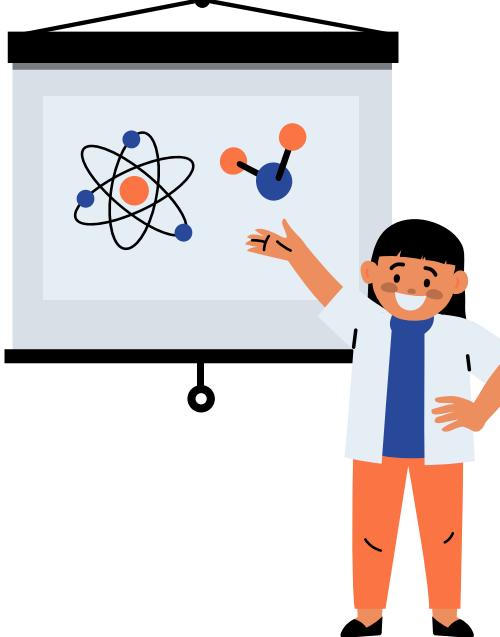


CAREER INSIGHTS
/ PREP

NEXT ➤



If you're mentally prepared to study more / do research more, then you can think of applying to Grad School or Exploring Existing Opportunities (in the fields beyond your imagination)!!!!



Good if done by December!

Application Materials



Passport

BSc (4 Yr) / MSc
[3 GPA minimum]

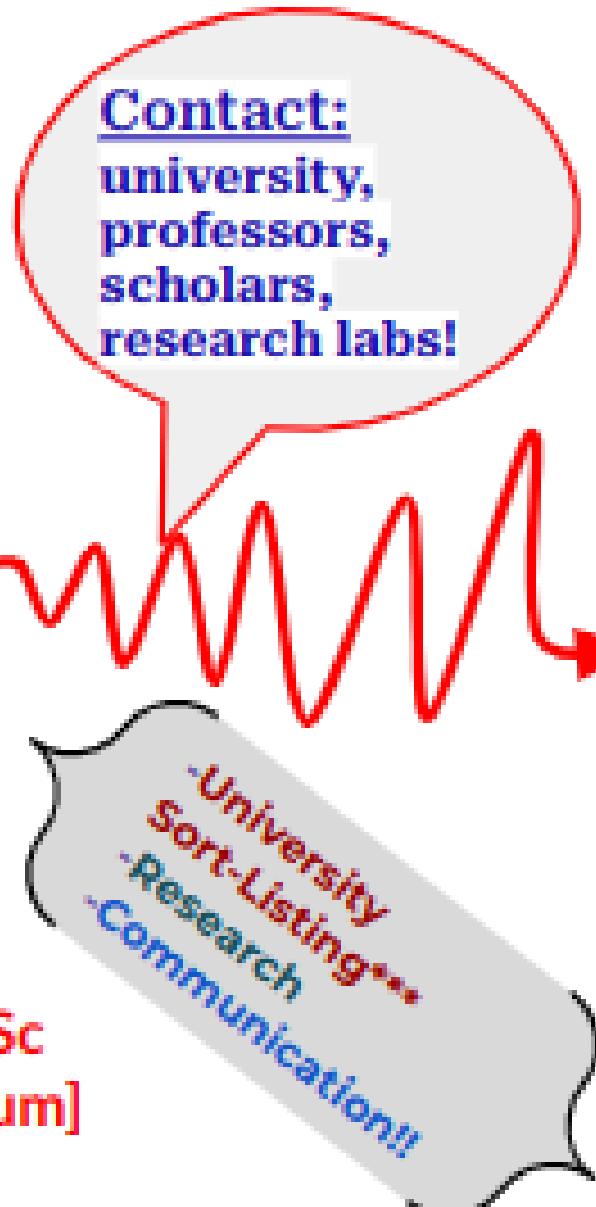
English:
TOEFL/IELTS/Other

Recommended: (mostly)
GRE, GRE Physics

CV/Resume**

SOP**

LOR



GRAD APP – FIRST STEP: APPLICATION PREPARATION

- **PASSPORT**



- **BACHELOR (BSC/BE/OTHER) [4 YEAR]
OR/AND MSC/OTHER MASTER**

3+ GPA



- **ENGLISH REQUIREMENT (TOEFL/ IELTS/PTE/DET)**

Min 80 on
TOEFL
(depends)

- **RECOMMENDED: GENERAL GRE /+ SUBJECT GRE**

- **CV/RESUME**



- **SOP/OTHER**



- **LOR**



GRAD APP – FIRST STEP: APPLICATION PREPARATION

- PASSPORT



- BACHELOR (BSC/BE/OTHER) [4 YEAR]
OR/AND MSc/OTHER MASTER

3+ GPA



- ENGLISH REQUIREMENT (TOEFL/ IELTS/PTE/DET)

Min 80 on
TOEFL
(depends)

- RECOMMENDED: GENERAL GRE /+ SUBJECT GRE

- CV/RESUME



- SOP/OTHER



- LOR



GRAD APP – FIRST STEP: APPLICATION PREPARATION

- **PASSPORT**



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- **RECOMMENDED: GENERAL GRE /+ SUBJECT GRE**

- **CV/RESUME**



- **SOP/OTHER**



- **LOR**



**BUT HOW TO MAKE YOUR
APPLICATION
STRONG?**

GRAD APP – FIRST STEP: APPLICATION PREPARATION

- **PASSPORT**



- **BACHELOR (BSC/BE/OTHER) [4 YEAR]
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- **ENGLISH REQUIREMENT (TOEFL/ IELTS/PTE/DET)**

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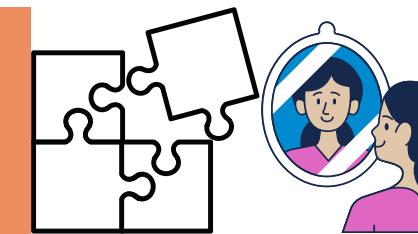
- **CV/RESUME**

- WHO'RE YOU?
- WHAT HAVE YOU DONE SO FAR?



- **SOP/ESSAY**

- WHO ARE YOU AS A PERSON BEYOND YOUR CV/NUMBERS?
- OVERCAME CHALLENGES/PROBLEMS?
- CONTRIBUTION TO THE SOCIETY (GOOD HUMAN?)?,
- FUTURE PLANS/CAREER GOALS (WELL READ/READY PERSON!)?
- HOW ARE YOU BETTER AT WHAT YOU WANT TO DO (BEYOND NUMBER!)?



- **LOR**



OTHER STEPS IN UPCOMING SERIES.....

THANK YOU!