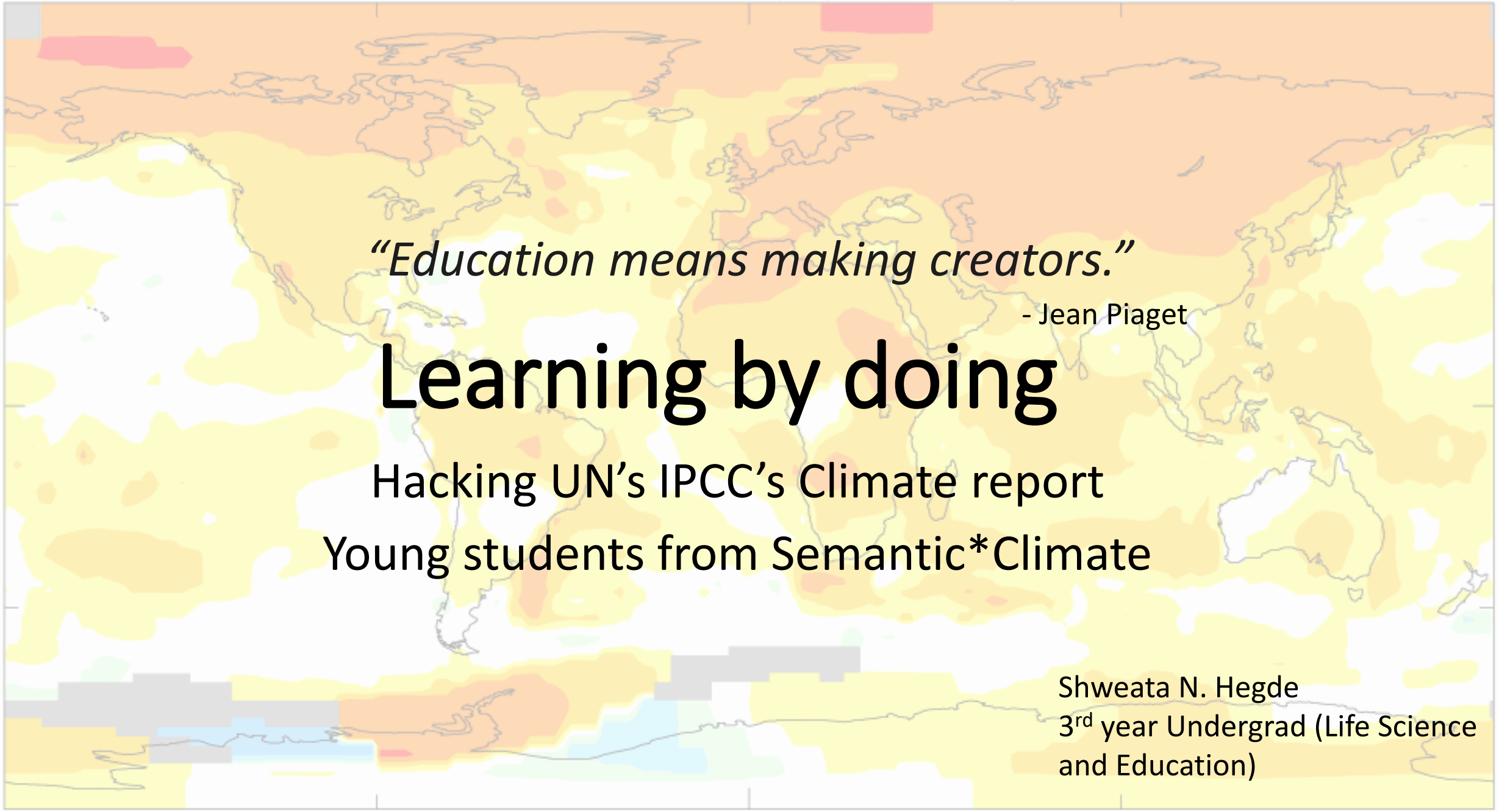


“Education means making creators.”

- Jean Piaget

Learning by doing

Hacking UN’s IPCC’s Climate report

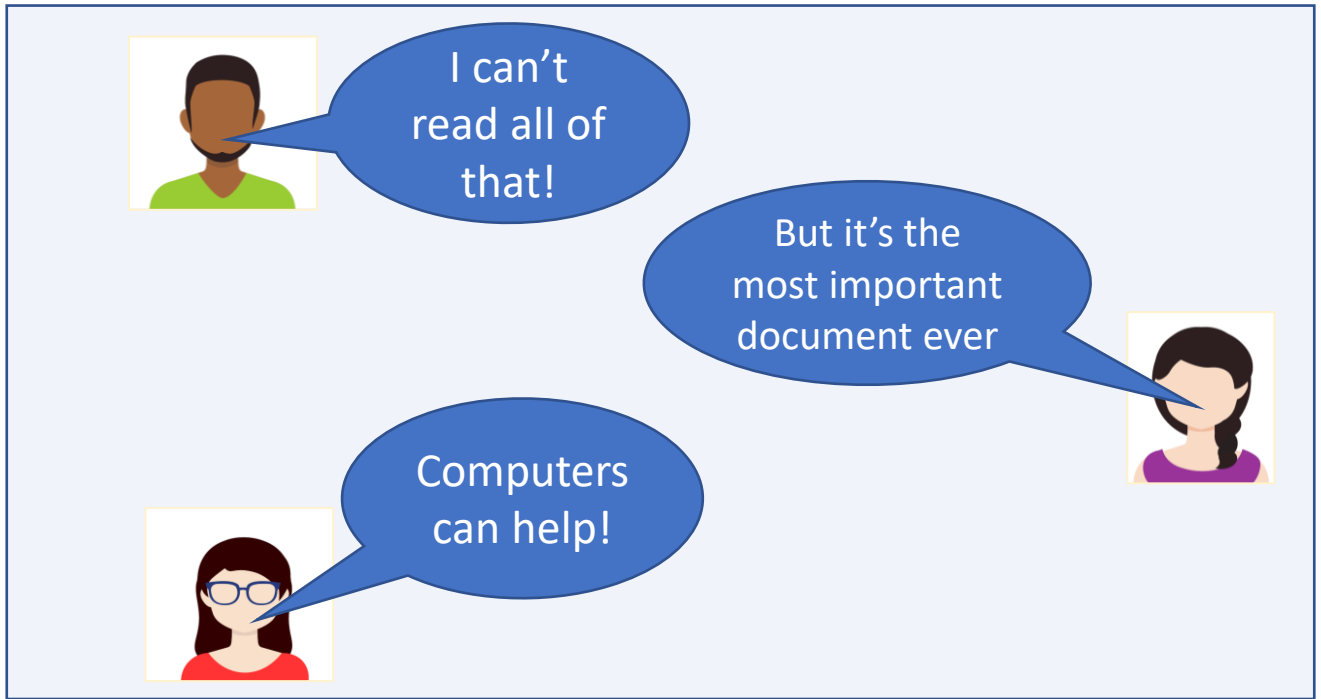
Young students from Semantic*Climate

Shweata N. Hegde
3rd year Undergrad (Life Science and Education)

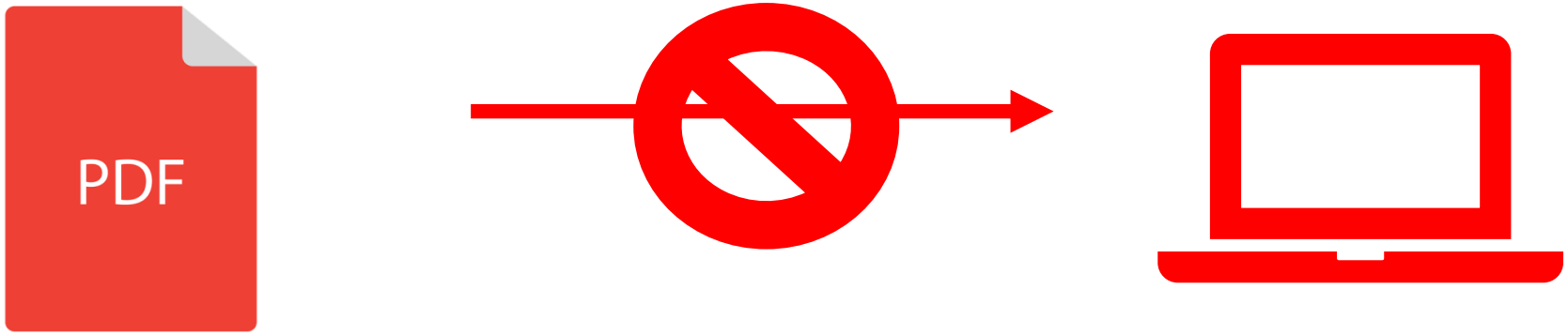
*Machine understandable

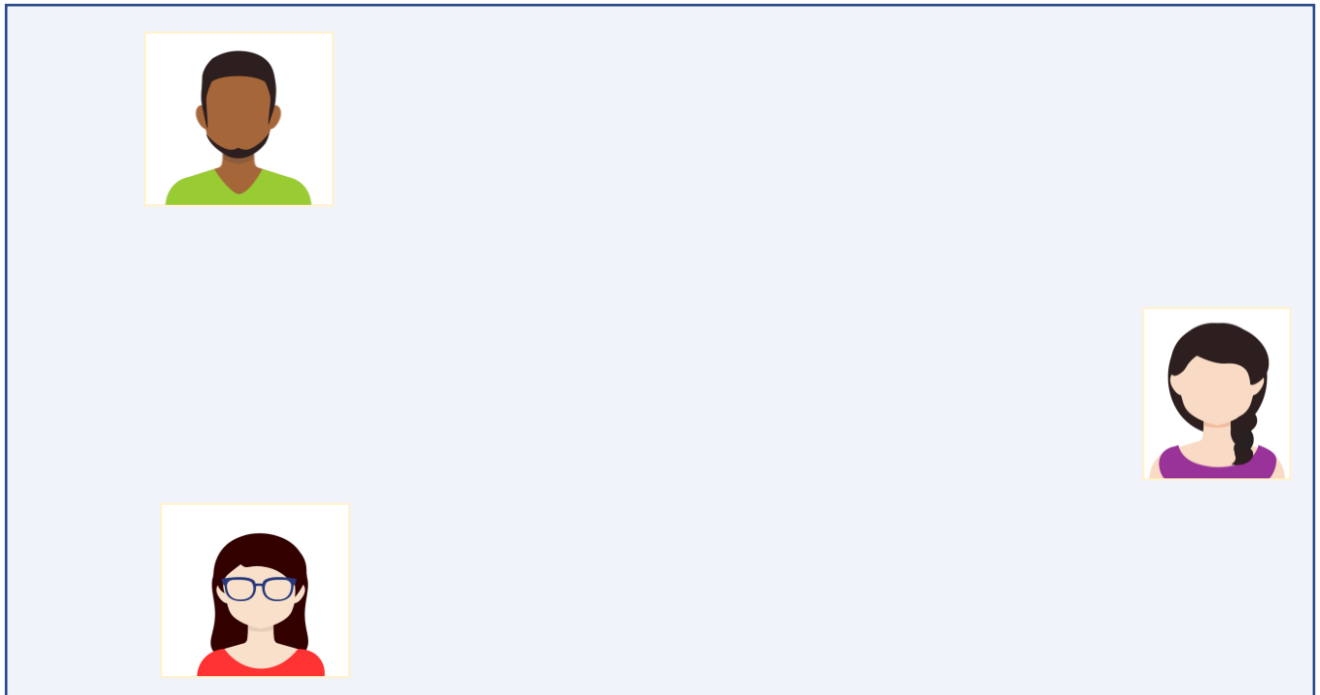
IPCC reports – most important document ever!

- 3000 pages;
- technical
- not editable

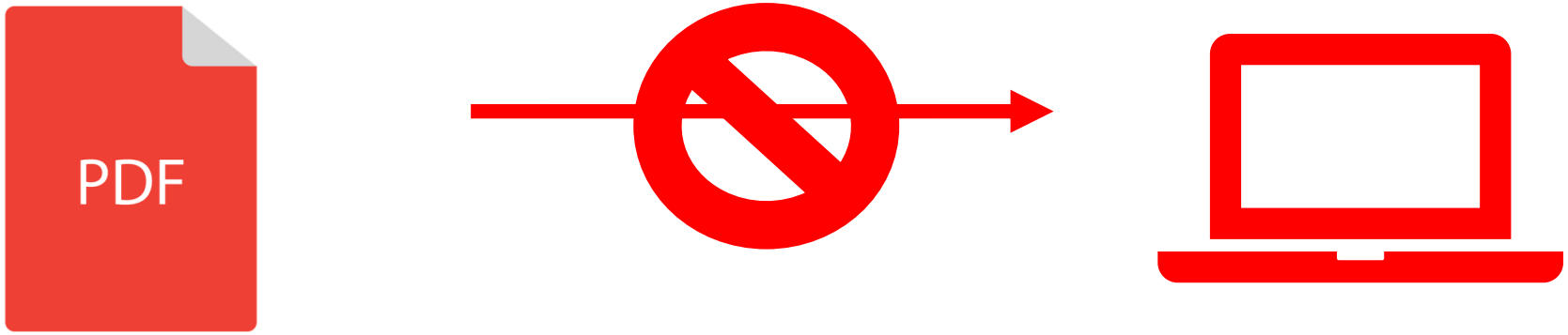


Machines can help, but…





Machines can help, but…

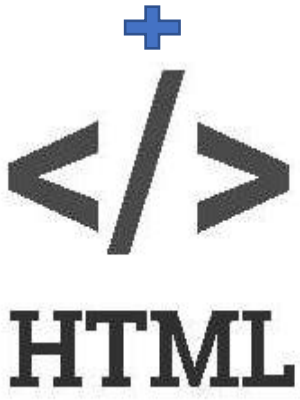


SemanticClimate's tools!

IPCC chapters

pdfplumber

50 Million Scientific papers



docanalysis

Climate-related terms dictionary

…despite mitigation efforts 8 including those in near-universal nationally determined contributions (NDCs)…

Abbreviation dictionary

Now I can read the reports!

TIGR²ESS

Transforming India's Green Revolution by Research and Empowerment for Sustainable food Supplies

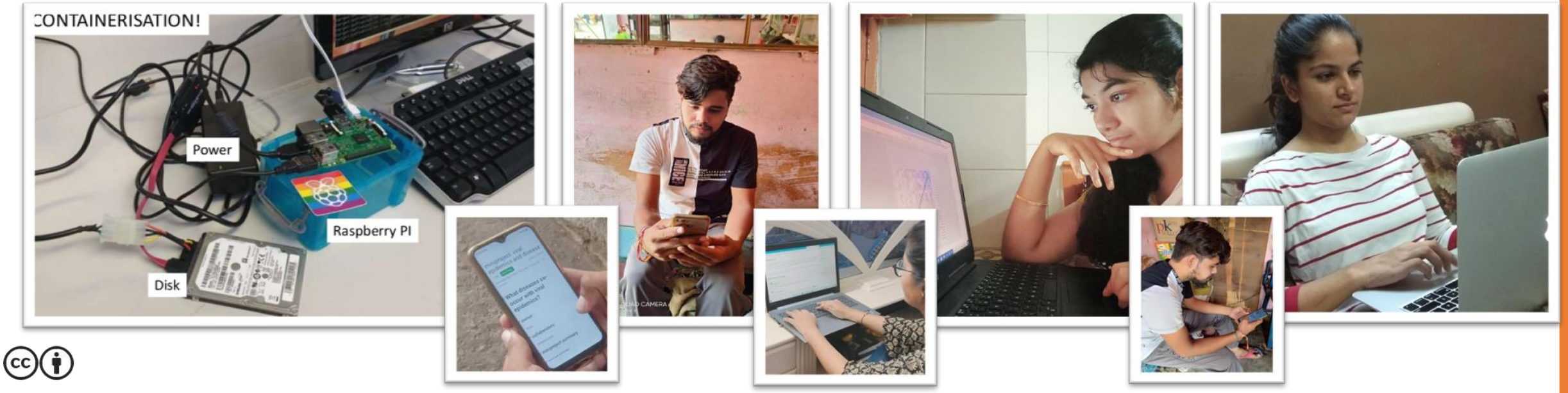
We NIPGR Interns have learnt to…

National Institute of Plant Genomic Research, New Delhi

University students working for 2-6 months in an external organization

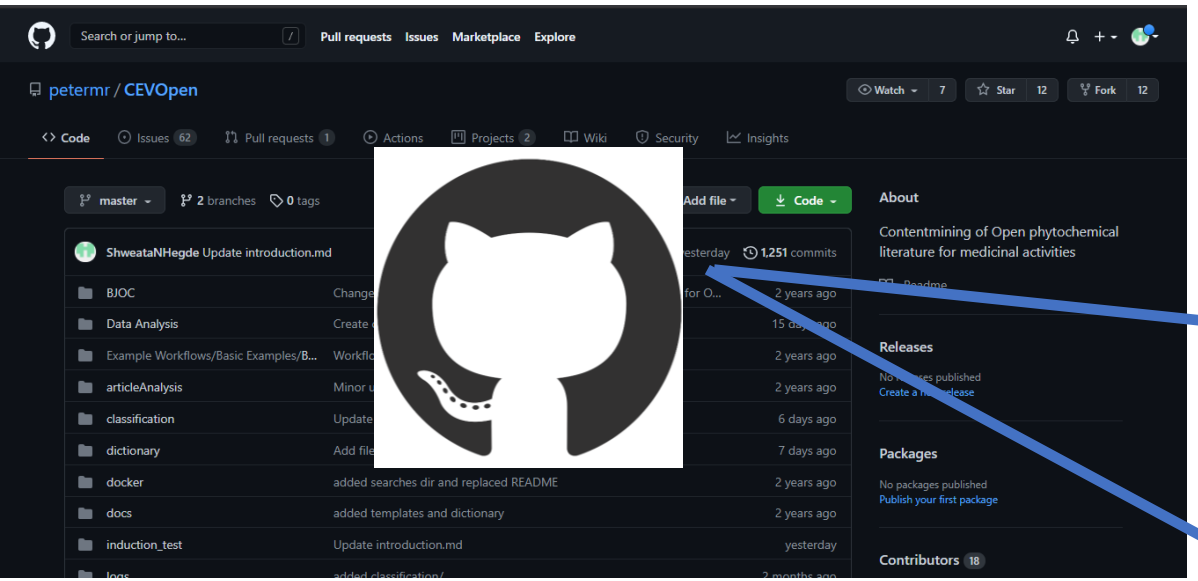
Code! Use tech!

Python



Slide Credit: Ambreen Hamadani

Collaborate…



GitHub

Open Notebook Philosophy*

Everything on the web!

Updated 19-hours ago

real-time updates!

Try it!

https://github.com/petermr/CEVOpen
https://github.com/petermr/pygetpapers
https://github.com/petermr/pyami

*https://en.wikipedia.org/wiki/Open-notebook_science

Work as a community and be accountable

Not-started

In-progress

Completed

People

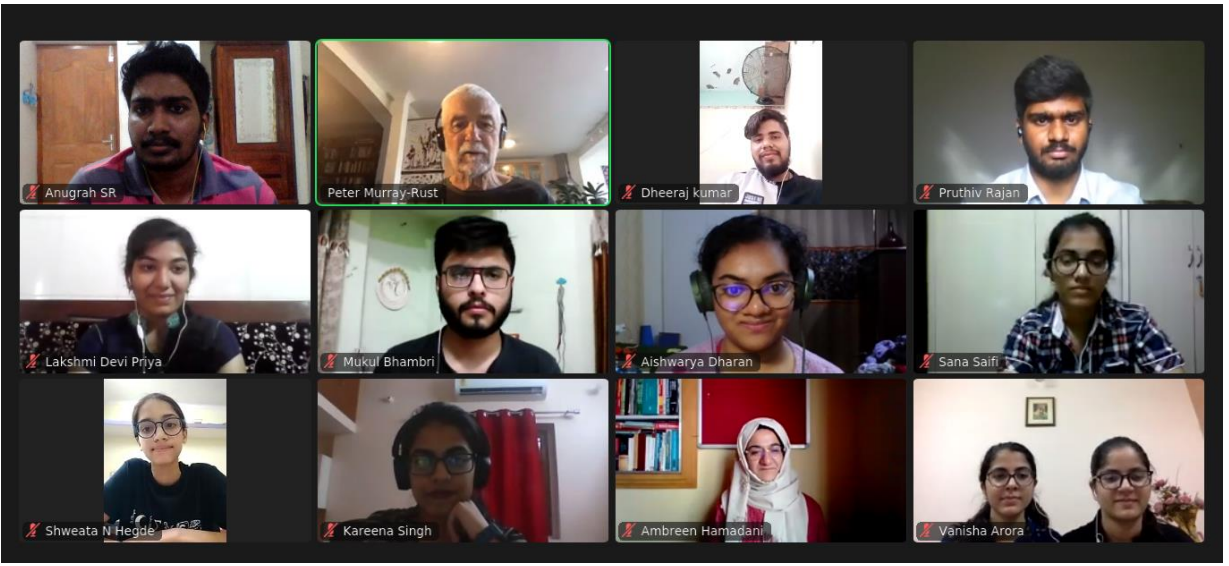
Tasks

ISSUES	Ambreen	Vaishali	Priya	Rajan	Vanisha	Sana	Kareena	Charles
corpus (between 200-950)	Ready	Ready	Ready	Ready	Ready	Ready	Ready	Ready
dictionary	Ready	Ready					Ready	In progress
annotated (Pos/Neg) viral epidemics	8.90%	40/10					121/29	5/35
	Ready	Ready					Ready	Haven't Started
notebooks	Ready	In progres				tarted	In progress	Haven't Started
machine learning / NLP	In progress	In progress	Haven't Started	In progress	In progress	In progress	In progress	In progress
display	In progress	Haven't Started	Haven't Started	Haven't Started	Haven't Started	Haven't Started	In progress	In progress
language variants	Ready	Haven't Started	Ready	Ready	Haven't Started	In progress	Haven't Started	Haven't Started
ami search	Ready	In progress	Ready	Ready	Ready	Ready	Ready	Haven't Started

What I Did?
What I Plan to Do?
Blocks?

Daily Catch-up

Reach out to the world with our tech

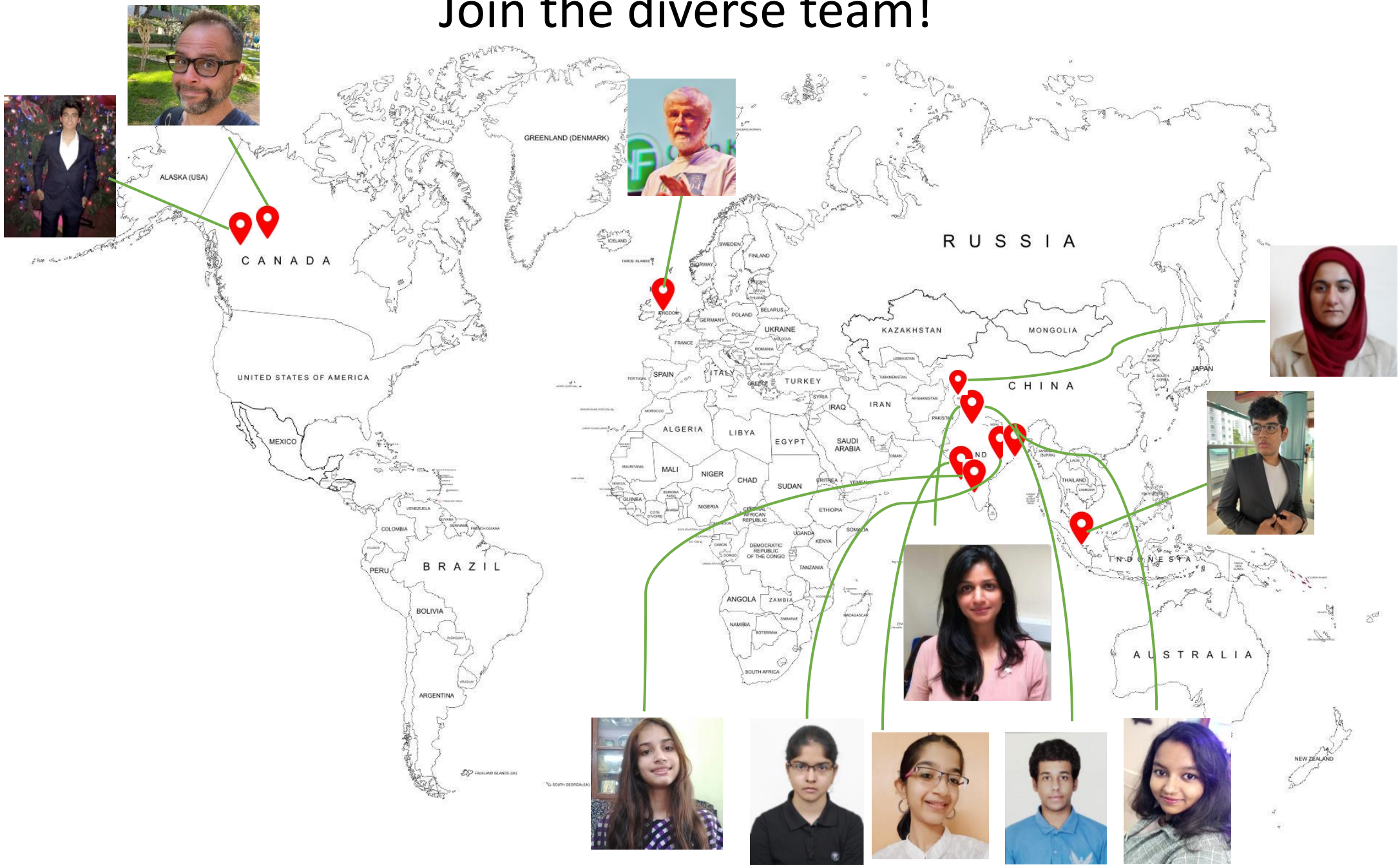


cambiohack

We met Ayush, high schooler – author of pygetpapers -- at a Hackathon!

Maybe we'll meet our next Ayush today?

Join the diverse team!



What you might do…

- Pick a chapter from IPCC report and extract information using our tools!
- Select key words and search the scientific literature (EPMC)
- Build dictionaries using Wikidata

```
 <entry term="cone“
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y/Q22710" wikidataID="Q22710"
wikipediaPage="https://en.wikipedia.org/wi
ki/Conifer_cone">
    <synonym>Cone, Conifer cones,
Strobilus, pine cone, pine-cone, pinecone,
pine cones</synonym>
    <synonym xml:lang="zh">松球</synonym>
    <synonym
xml:lang="de">Koniferenzapfen</synonym>
    <synonym xml:lang="hi">कोणधारी
कोण</synonym>
    <synonym xml:lang="es">cono</synonym>
    <synonym xml:lang="fr">cône</synonym>
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reproducteur des conifères</description>
    <description xml:lang="es">estructura
vegetal</description>
  </entry>
```
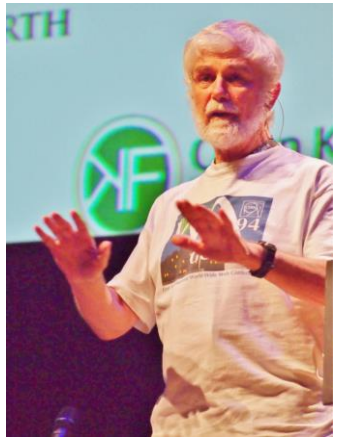
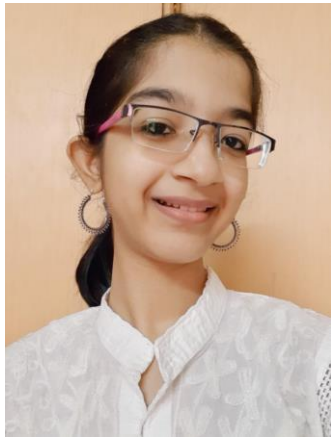

Our Team

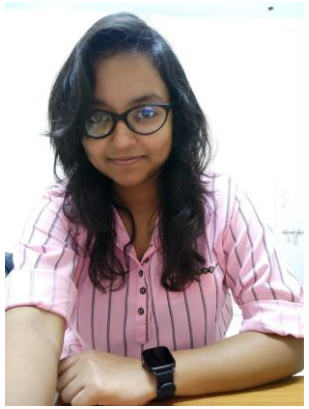


Dr. Peter Murray-Rust
Reader Emeritus in Molecular Informatics
Univ. of Cambridge

Dr. Gitanjali Yadav
Group Leader, Computational Biology Laboratory
National Institute of Plant Genome Research



V.S.M.Roopa
BSc. Math,Stats,CS
St. Francis College, Osmania Univ.



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Verriclear Natural Skin Essentials

Anubhab Chakraborty
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IISER Bhopal

Slide Credit: V. S. M. Roopa