

Ivy Scholars Research BootCamp

Learn with Researchers & professors from:



Cornell University



Grades 8-12



BEYOND THE CLASSROOM.



BOOTCAMP OVERVIEW

WHAT IS THE IVY SCHOLARS RESEARCH BOOTCAMP ?

Rigorous Academic Foundation and Innovative Approach

Designed to emulate the standards of prestigious research institutions worldwide, this intensive bootcamp combines the academic excellence of Ivy League traditions with the cutting-edge methodologies of leading global research entities.

Exploration of Research Fundamentals and Advanced Methodologies

Within this research bootcamp, participants immerse themselves in an in-depth exploration of fundamental research principles. Delving into diverse methodologies, the importance of data, and the integration of Artificial Intelligence for enhanced research efficiency, participants acquire essential skills and knowledge vital for navigating today's complex research landscape.

Start your Research Journey Today!

BOOTCAMP DETAILS



On Completion, students get a **Certificate of Achievement** from Big Red Education, Scholar Launch, signed by the mentor.



Opportunity to get an **LOR** from course instructors who are researchers at top institutions like Stanford, MIT and more!



Opportunity to **get published in an International Journal.**



8th July-8th August 2025
6:30pm - 8:30pm IST



Online



Grades 8-12



INR 50,000 + GST



Deadline:
31st May 2025

EARLY BIRD fee: INR 40,000 + GST

Deadline: 30th April 2025



HOW DOES THE IVY LEAGUE LOOK AT RESEARCH?

Students who did research were
4 times more likely than the general pool to be
accepted into a top university.





THE CURRICULUM MODULE 1

Research - Lay of the Land

- What is research?
- What is the research process?
- What are types of research?

Live Demonstration of AI used in research

- Using AI to expedite research process
- Using AI to generate research work
- How to properly handle AI reliance in research?

Data - Is it as complicated as it sounds?

- What is data?
- What are data collection methods?

Activities:

- Brainstorm possible ways to study a given topic
- Design a data collection method



THE CURRICULUM MODULE 2

Ethics

- What are research ethics?
- How to navigate ethics in research?
- Plagiarism

Funding & Publication

- How are research projects funded?
- How are research results shared?

Activities:

- Teamwork: Identify the ethical concern
- Short presentations by each team on identified ethical concern

- Funding simulation round
- Team presentations of rationale behind funding decisions



THE CURRICULUM MODULE 3

STEM Track

Topic: **Machine Learning & AI**

Topic: **Computer Science & Applied Mathematics**

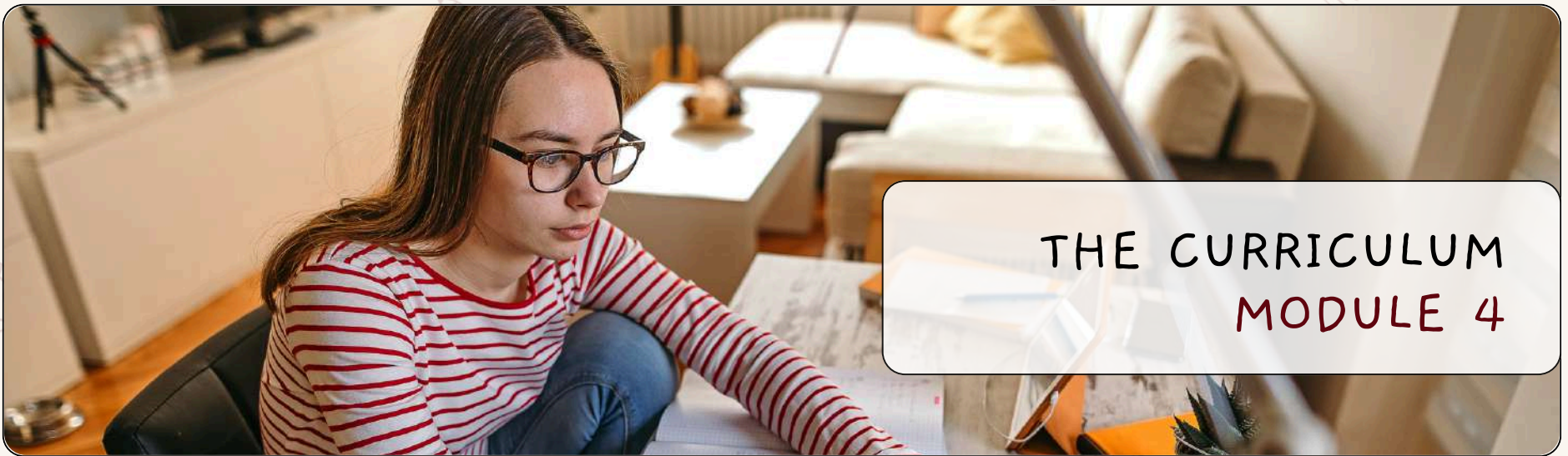
Social Sciences Track

Topic: **Finance, Economics and Business**

Topic: **Sociology & Social Psychology**

Activities

- In teams: Select an area of topic that is of interest, design some research questions in said area
- Randomization of research questions, design a methodology to study the allocated research topic and questions
- Explore intersection of Topic 1 and 2 - in teams. Brainstorm some research directions that would involve both areas.



THE CURRICULUM MODULE 4

STEM Track

Topic: **Hard Sciences & Engineering**

Topic: **Data Science & Applications**

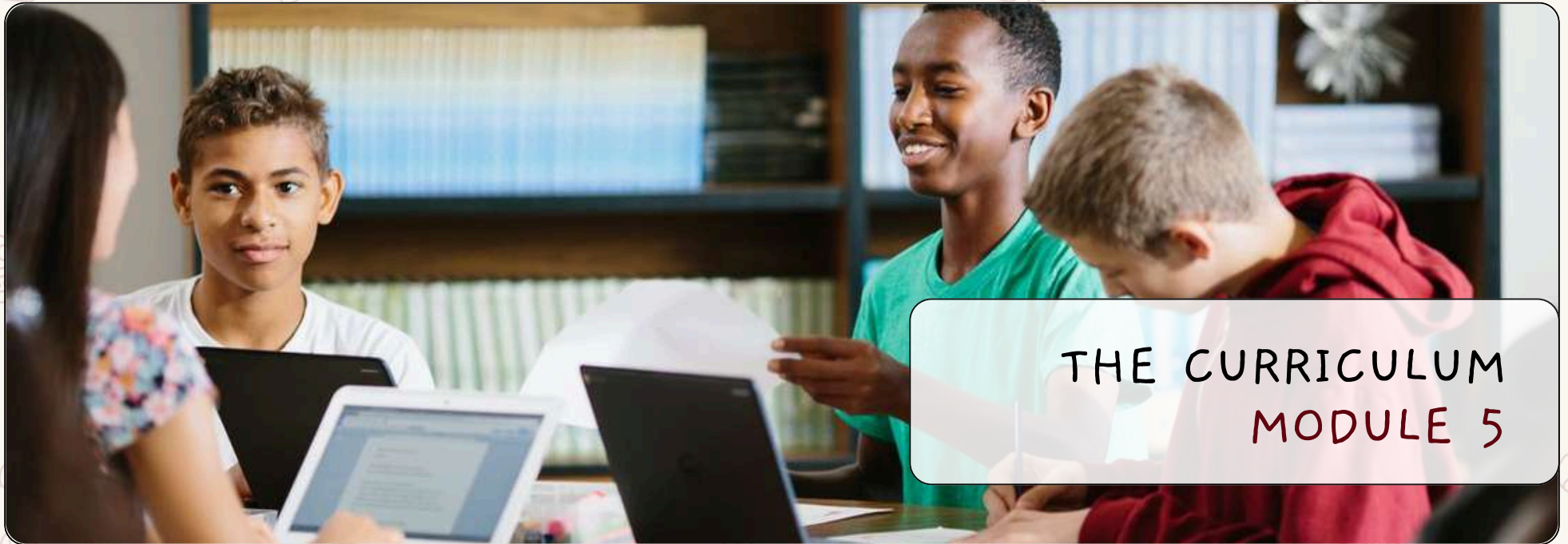
Social Sciences Track

Topic: **Law and Politics**

Topic: **International Relations and Political Science**

Activities:

- In Teams: Select an area of topic that is of interest, design some research questions in said area.
- Brainstorm how data would be collected in selected research area.
- Sharing of outcomes



Within separate STEM and Social Sciences Tracks

Building on the work of others

- Sharing of successful research projects in fields covered during Bootcamp, separated into STEM and Social Sciences Tracks
- After each sharing, breakout rooms for instructor-led, discussion-centric critique of each research project

Activities:

- Individual work: Reflect on how critique from various breakout sessions could apply to own work

THE CURRICULUM

MODULE 6

Within separate STEM and Social Sciences Tracks

Activity

Peer Review Panels

- Students randomly review peers' research papers
- Breakout rooms: Each reviewer will provide personalized feedback to author, along with suggestions for improvements

Activity

Individual work

- Incorporating individual work and feedback obtained, create condensed presentation/booth of research work for attract funding
- This can take any format - a powerpoint slide, a one-pager, a canva graphic etc. The goal here is to consider how best to present one's research project to attract funding.

Activity

Funding simulation

- Each student is given a certain amount of funds and is free to decide how and where to allocate funding among all presented research projects.
- The project(s) that attract the most funding will win merit.



THE CURRICULUM MODULE 7

Within separate STEM and Social Sciences Tracks

Presentation of research work:

- Top 10 research projects of each Track, as selected by instructors, will be invited to present to cohort
- Presented projects will receive live feedback from instructors and be subject to open Q&A from other students.

To the votes

- All projects, regardless of instructor selection, are eligible for participation.
- All students will vote in separate Tracks, for **winners** in the following categories- **Best research idea, Best research methodology, Best use of data, Best demonstration of intersectionality.**



Know Your
Ivy League Course Instructors:



Gabriel Arpino

Final year PhD student,
University of Cambridge

Machine Learning & AI

AI Research intern,
Google.



Dr. Sankalp Kota

PhD, **Drexel University**

Published **41** academic papers

- Principal Materials Engineering



Dr Brown

PhD, **Columbia University**

Ex-Faculty Member at
Princeton University.

- Sociology & Social Psychology



Ms Zhang

Computer Science & Engineering, **MIT**

- Machine Learning & AI
- Computer Science & Applied Mathematics
- Hard Sciences & Engineering



Avi Hegland-Fisher

**Colgate University &
University of
Pennsylvania Alum**

- Certificate in Management, **Wharton**



Maya Gobert

**Cornell University
Alum**

Founder: Leadership &
Innovation Lab

- Economics and
Political Science



Mr Culka

Ph.D. Candidate
International Law,
Charles University

- International Relations
and Political Science



Justin Bevilacqua

Executive Operations
Officer, **Harvard
Business Law Review**

Intelligence Tradecraft
Officer, **U.S. intelligence
community**



Dr Andrew Jahn

**Carleton College &
Indiana University Alum**

- Diffusion imaging
- Machine learning
- Structural analysis
- Surface-based analysis

Know more about the Instructors

Please note that the mentors shown above were part of the previous cohort of the Bootcamp.

KEY DELIVERABLES

- Guaranteed **peer-reviewed and instructor-critiqued research product** by the end of the Bootcamp
- Potential **showcase of top selected research products on international platform**
- Consideration for top research products for Special Edition of **Scholarly Review Showcase**
- Curated opportunities to form research teams and **connect with co-authors** for further development of research project
- Opportunity to **learn from professors from top institutions** and experts with hands-on industry experience
- **Completion Certificate** signed by top Ivy League Scholars and Researchers
- Guaranteed final evaluation that may lead to a **Letter of Recommendation** from said professors and experts and/or a Letter of Recommendation from Director of Student Innovation

WHY SHOULD YOU PARTICIPATE?

ACHIEVE REAL RESULTS

By the end of the bootcamp, **you'll have a research project that's not only completed but also reviewed by peers and critiqued by instructors**, ensuring quality and depth.

SPOTLIGHT YOUR WORK

Stand out with the **chance to have your top-notch research showcased on an international platform** and considered for a special edition of our Scholarly Review Showcase.

BUILD YOUR RESEARCH NETWORK

Dive into curated networking opportunities to form research teams and **connect with potential co-authors**, paving the way for ongoing collaboration and project development.

LEARN FROM THE BEST

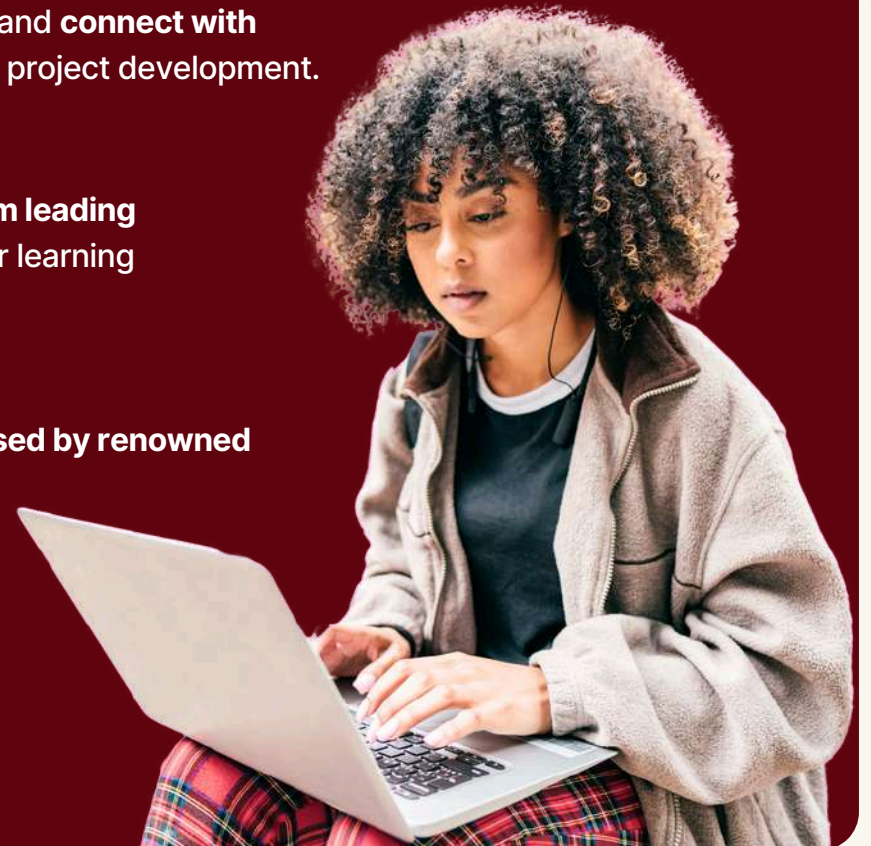
Gain **invaluable insights from professors and industry experts from leading institutions like Stanford, MIT, Cornell, and UPenn**, enhancing your learning with real-world experience.

EARN RECOGNIZED CREDENTIAL

Complete the bootcamp and receive a **Certificate of Award, endorsed by renowned researchers**, as a testament to your hard work and new expertise.

OPEN DOORS TO FUTURE OPPORTUNITIES

Excel in your final evaluation and **you could secure a Letter of Recommendation from our esteemed professors and experts**, or even from the Director of Student Innovation, boosting your academic and professional journey.





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Cornell University



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