



# Ivy Scholars Research BootCamp

Learn with Researchers & professors from:



Cornell University



## **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 program 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 and the Ivy Learning Lab.



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.**



27th Jan - 5th Feb 2025  
6:30pm - 9:30pm



Online



Grades 8-12



INR 45,000 + GST



Deadline :  
10th Jan 2025

**EARLY BIRD Fee- INR 35,000 + GST**

**Deadline: 10th Nov 2024**



## 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.





# Know Your Ivy League Course Instructors:

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*\*Please note that the instructors mentioned here are from the previous BootCamp cohort.\**



**Patrick McQuillan**

Ex- instructor-  
**University of Oxford &  
Boston University**

- Data Science & Applications
- Data Architecture & Artificial Intelligence



**Dr. Norihiro**

PhD, **Stanford  
University**

- Hard Sciences & 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



# SUCCESSFUL STORIES OF RESEARCH ALUMS

## DEREK, COMPUTER SCIENCE

### Challenge:

- Derek has competed in many contests and attended many programs, but has never really experienced research before.
- He felt that his knowledge has been taught to him in an abstract setting and he would like to apply it in practical ways and solve real-world problems.

Her **paper was published by the Journal of Student Research** - High School Edition with a very high peer review score (4.5 / 5).

### Got admitted into:



Massachusetts  
Institute of  
Technology

## SUSAN, MUSIC THERAPY

### Challenge:

- Susan, with prior research experience in science, sought to merge her passions for music and science into a cohesive project.
- She aimed to stand out among university applicants by embarking on an interdisciplinary research program exploring the relationship between music and memory within the realm of brain science, although she lacked direction on how to begin.

Her **paper was published by the Journal of Student Research** - High School Edition with a very high peer review score (4.5 / 5).

### Got admitted into:



# Publish **your 1st** **Research Product!**

Get a chance to Publish your research paper in a top international journal upon program completion. Gain global recognition for your groundbreaking work.





### **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



### **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



### **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 DAY 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

# DAY 6

# THE CURRICULUM

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 DAY 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.**



# CERTIFICATE

OF ACHIEVEMENT

This certificate acknowledges that

**Full name**

has successfully completed the  
**Ivy Scholars Research BootCamp** on 6th August, 2024

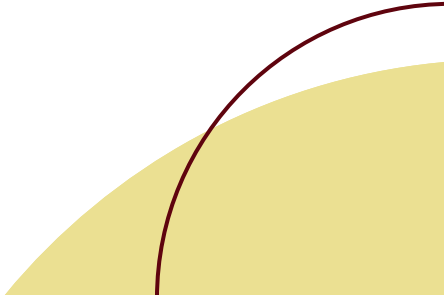
*Signature*

Ivy Scholar/Researcher  
**Ivy League Designation**

*Ivy Scholars Research BootCamp immerses participants in fundamental research principles,  
equipping them with essential skills for navigating today's complex research landscape.*

On Completion, students get a **Certificate of Achievement** from Big Red Education, Scholar Launch and the Ivy Learning Lab, signed by the Ivy League Mentor/Researcher.

# 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
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# 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***

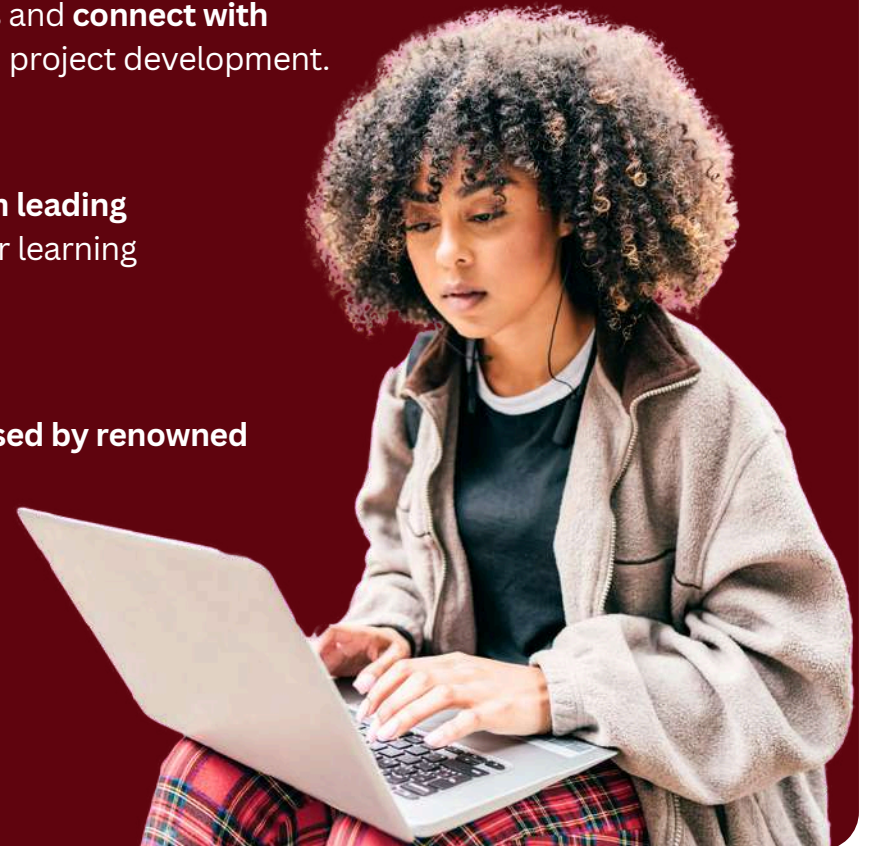
Gain **invaluable insights from professors and industry experts from leading institutions like Stanford, MIT, Cornell, and UPenn**, enhancing your learning with real-world experience.

## ***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.





# Ivy Scholars Research **BootCamp**

Learn with Researchers from:



Cornell University



**PRINCETON  
UNIVERSITY**

**Apply NOW!**

 [www.bigrededucation.com](http://www.bigrededucation.com)  +91-931-045-0013

