

JUNIOR EXPLORER PROGRAM







NOTE FROM THE PROGRAM DIRECTOR

As a kid, I remember asking questions that stumped my parents. They would always answer - but I could tell that I was just pressing at the edge of their knowledge.

Looking back, I wish I had a mentor who was as nerdy as I was about my interests (in 7th grade it was economics for me!). That's why I started Lumiere and our Junior Explorer program. In the program, you work 1-1 with a world-class expert to explore an area that excites you (I'm one of the mentors)!

Last year, we had over 5000 students apply to our programs. It's not a great fit for all students – we're usually best for ambitious and gifted students. But, for those for whom it makes sense, we're excited to help you explore.

DHRUVA BHAT

Harvard College '17 Oxford PhD, Rhodes Scholar





LUMIERE BY THE NUMBERS

2022-2023 SCHOOL YEAR

4200+

Applications

1400+ Mentors 22000+

Mentoring hours

62 Countries \$390,000+

In financial aid



WE HELP STUDENTS



EXPLORE YOUR ACADEMIC INTERESTS

Work with a mentor from a top university 1-on-1 to explore your interests in a field of your choice e.g Engineering, Business, Biology etc



BUILD A MEANINGFUL PROJECT

Create a research report OR Create a presentation OR Create something else (Surprise us!)



PREPARE FOR HIGH SCHOOL OR COLLEGE

Build reading, writing, critical thinking, problem solving, and innovation skills to excel in your academic journey





AVAILABLE EXPLORATION TRACKS

STEM

- Computer science
- AI & data science
- Psychology

- Physics & astrophysics
- Economics
- Biology, medicine, and public health

- Engineering
- Mathematics

HUMANITIES AND SOCIAL SCIENCES

- Business, entrepreneurship, and strategy
- History, international relations, and government
- Environment studies
- Sociology and anthropology





OUR MENTORS

Lumiere has **1400+** mentors from top universities









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	Technology

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Yale







EXAMPLE MENTOR PROFILES





CAITLIN NICHOLS HARVARD UNIVERSITY PhD in Biological and Biomedical Science

SPECIALIZATION

Cancer Genetics, CRISPR Gene Editing, Molecular Biology PRAISE OWOYEMI UNIVERSITY OF CALIFORNIA, LOS ANGELES PhD student in Clinical Psychology

SPECIALIZATION Psycho-oncology, Clinical Psychology, Health Psychology



BHARGAV GOPAL COLUMBIA UNIVERSITY PhD in Economics

SPECIALIZATION Labor Economics, Law and Economics, Applied Statistics



SANAH BHIMANI YALE UNIVERSITY PhD candidate in Physics

SPECIALIZATION Cosmology (Evolution of the Universe), Exoplanet Data Analysis



SAMUEL LEITER MIT UNIVERSITY PhD candidate in International Affairs

SPECIALIZATION

Nuclear Proliferation, Preventive War, East Asian Security, Alliance Politics







JUNIOR EXPLORER PROGRAM

An 8-week program for middle school students to explore their academic interests while building a project they are passionate about





WEEKS 1-4 Explore different tracks

WEEKS 5-6 Deep dive into one topic area and define your project



WEEKS 6-8

Build your project with support from the mentor



WHAT THE PROGRAM COULD LOOK LIKE FOR YOU

Example 1: Biology, medicine, and public health track

WEEK 2 Exploration What causes diseases and how can we prevent them? WEEK 4 Exploration How do species adapt and survive in a changing world? WEEKS 7-8: Working on the project A 5 page research report

WEEK 1 Exploration How is the human body structured? WEEK 3 Exploration Understanding genetics and gene-editing WEEKS 5-6 Identifying a Research Question

Exploring CRISPR and its potential to treat sickle cell anemia, a genetic disease

Junior Explorer Program





WHAT THE PROGRAM COULD LOOK LIKE FOR YOU

Example 2: Business, entrepreneurship, & strategy

WEEK 2 Exploration How to craft a winning business plan WEEK 4 Exploration Financial literacy for entrepreneurs WEEKS 7-8: Working on the project Harvard business school style case study

WEEK 1 Exploration Exploring the key components of

ventures

successful business

WEEK 3 Exploration How do effective branding and marketing foster customer loyalty WEEKS 5-6 Identifying a case study How did LEGO become successful brick by brick?



WHAT THE PROGRAM COULD LOOK LIKE FOR YOU

Example 3: AI & data science track

WEEK 2 Exploration What is natural language processing (NLP) and how is it used to create a chat bot? WEEK 4 Exploration How do computers recognize faces and voices?

WEEKS 7-8: Working on the project A presentation sharing the findings

WEEK 1 Exploration Understanding the fundamentals of data Science

WEEK 3 Exploration

How to make sense of data through analysis and visualization

WEEKS 5-6 Identifying a data analysis project forecasting weather patterns in New York city

Junior Explorer Program



WHAT THE PROGRAM COULD LOOK LIKE FOR YOU

Example 4: History track

WEEK 2 Exploration Why is it important to remember the Holocaust? WEEK 4 Exploration What did Christopher Columbus's voyage reveal about the new world? WEEKS 7-8: Working on the project A 7-10 page literature review

WEEK 1 Exploration

What can ưe learn from ancient Egypt: The land of Pharaohs? WEEK 3 Exploration How did Rosa Parks spark the civil rights movement? WEEKS 5-6 Identifying a research question How did the Nile river influence the daily life and agriculture of ancient Egyptians?



OUR PROGRAM

Program goal	Explore an academic field with an expert and build a unique project.			
Structure	Weekly 1-1 virtual sessions with a mentor			
Duration	8 weeks			
Student profile	Grades 6-8			
Pre-requisites	No prior experience required			
Output	High school level project			
Cost	\$2400 Financial aid is available			

LUMIERE RESEARCH INCLUSION FOUNDATION

In 2022, we officially launched a 501(c)(3) non-profit, the Lumiere Research Inclusion Foundation, that provides free high-quality research opportunities to talented, financially disadvantaged students.

What We Do

At the foundation, we pair talented students with volunteer mentors to do the Junior Explorer Program at no cost.

Our Impact

35 Countries expanded outreach to 1500+ Applications in the

past year

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175

Students supported through aid

To apply for our foundation, select **yes** for the question "**Would you like to apply for need-based financial aid scholarship?**" in our application



SELECTED STUDENT PROFILES



KATHLEEN



LILY



ARAL

PROJECT TOPIC:

Gender barriers that students face in accessing computer science education

LUMIERE EXPERIENCE:

"Lumiere allowed me to believe I can do research and helped me do something I never imagined I would be able to. Because of you all, I'm not so scared that I will succeed in high school and college

PROJECT TOPIC:

How can the standard model of particle physics be consistently extended to include additional light-matter fields, and how might such fields explain dark matter?

LUMIERE EXPERIENCE:

"Lumiere truly helped me a lot! The admissions office at Princeton called my mentor and asked him questions about me. Because the university values research a lot, I got in! Thank you so much because with this program and this chance I would never ever be able to attend and get a full ride."

PROJECT TOPIC:

Analyzing life on Exoplanets

LUMIERE EXPERIENCE:

Using data from NASA's exoplanets archive, Aral and his mentor aimed to gauge the level of habitability of various planets by analyzing factors like temperature, distance from star, eccentricity, etc. Aral learned how to use the NumPy library for the first time and also grappled with the nuances of data analysis.





APPLICATION TIMELINE

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Application: Fill out an online application form before the deadline



Interview: Shortlisted students will be scheduled for an interview



Mentor Match: Selected students will be matched with a mentor in their selected track

Start the program!



APPLICATION DEADLINE & PROGRAM DATES

FALL 2024	0	Application Deadlin 25 th Aug, 2024	e		Cohort Timing 16 th Sept, 2024
WINTER 2024	C	Application Deadline 24 th Nov, 2024			Cohort Timing 16 th Dec, 2024
SPRING 2025	C	Application Deadline 9 th February, 2025			Cohort Timing 3 rd March, 2025
SUMMER 2025	0	Application Deadlin Early Admission: 9 th February, 2025 Priority Admission:	e Regular Admission 1: 13 th April, 2025 Regular Admission 2:	2	Cohort Timing 2 nd June, 2025
SUMMER II 2025	0	9 th March, 2025 Application Deadlin 23 rd June, 2025	11 th May, 2025 e	2	Cohort Timing 14 th July, 2025

Apply: https://airtable.com/appK9HemdsQBzVefU/shrNoOieWVQDjjDGQ



To learn more or schedule a private info session, please reach out to our Head of Partnerships at maya.novak-herzog@lumiere.education

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