



The Lakshmi Mittal and Family  
**SOUTH ASIA INSTITUTE**  
HARVARD UNIVERSITY

# 2024 Program for Scientifically-Inspired Leadership (PSIL)

Telangana, India

Program Handbook





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**The Program for Scientifically-Inspired Leadership (PSIL)** brings together three groups of students to create the PSIL community: Harvard undergraduates, Osmania university students, and high school students from BC welfare schools in Telangana. While high school students are developing leadership skills, Harvard undergraduates and Osmania Students are learning how to be effective teachers. By interacting with one another, all three groups gain a deeper understanding of teaching and learning as well as expand their worldviews as they share experiences with people from many different backgrounds. PSIL is structured with the scientific method as its central theme. This is because the scientific method ensures unbiased and objective investigations in the pursuit of knowledge. PSIL focuses on the scientific method rather than concepts one learns in science classes and applies this scientific method towards the development of soft skills critical for growth.

By no means is this a one-way transaction of ideas and thoughts. Through their interactions with you, PSIL instructors will hone their teaching skills and get an opportunity to immerse in and absorb the rich cultural heritage of Telangana.

PSIL '24 is enabled by a memorandum of understanding between **President and Fellows of Harvard College, Education Department, Government of Telangana, and Osmania University.**



## Program Leadership



**Dominic Mao** is the Assistant Director of Undergraduate Studies for two of Harvard's life science concentrations and a lecturer in the Department of Molecular and Cellular Biology at Harvard. He was born in Imphal, Manipur and lived there for 16 years after which he lived in Gujarat for about 10 years. Looking back at his journey, he remembers a handful of people who genuinely cared and steered him in the right direction. He loves photography and music (there is a special place in his heart for rock music!). He also loves to cook!



**Andrea Wright** is the Allston Burr Resident Dean of Eliot House, Assistant Dean of Harvard College, and a Lecturer of Anthropology at Harvard University. She completed an M.A. in Development Studies at the Tata Institute of Social Sciences in Mumbai, India and an M.A. and Ph.D. in Anthropology at Brown University. She has lived and worked in India for over five years and never passes up an opportunity to eat pani puri! She loves traveling and cooking.

## Instructors



**Shefali Prakash** returns to PSIL 2024 as Head Teacher on the Harvard Team. She is a third-year at Harvard University studying Applied Mathematics, Economics, and Government. She is from Phoenix, Arizona, though her family is originally from India. At Harvard, Shefali is heavily involved with the startup and entrepreneurship ecosystem. She helps run Harvard Ventures and Women in Entrepreneurship. In addition to her interests in startups, she is passionate about education equity and has spent countless hours teaching and tutoring. She is also interested in international relations and diplomacy and is involved with the Institute of Politics at Harvard. In her free time, she loves reading, spending time with her friends, and playing tennis and badminton.



**Lap Nguyen** is a fourth-year student studying Economics and Government. He is originally from Ho Chi Minh City, Vietnam but now resides in Rochester, Minnesota. He is the Managing Director of the Emerging Technology Group and had served as the President of Harvard Model Congress Europe. He is deeply passionate about leadership development and helping students achieve their full potential. His academic lies at the intersection of public policy, societal values, and their role in economic development. In his free time, he loves to collect foreign banknotes, hike in nature, experiment with photography, catch up with the latest news, and hang out with friends.



**Lindsey Lawson** is a fourth-year student studying Psychology and Educational Studies at Harvard College. She was born in North Carolina and is from Cazenovia, New York. She is a retired collegiate basketball player. She is interested in a career exploring the intersection of social entrepreneurship, education, and psychology. From coaching girl youth sports to experiencing women's sports first-hand, she has developed a passion for gender studies and advancing gender equality in sports, school, and life. She plans to do research, teach, and travel throughout Asia post-graduation, attend graduate school, and start a private therapy practice. In her free time, she enjoys lifting, yoga, and taking long runs.



**Ida Kozuchowska** is a third-year student at Harvard studying Applied Mathematics, Stem Cell Biology, and Global Health Policy, originally from Warsaw, Poland. At Harvard she's involved with an array of passions: neuroregenerative biology research at Boston Children's Hospital and MIT, behavioral economics research at HBS, choreographing Latin dance, and the educational side of the Harvard Crimson, the oldest US collegiate newspaper. This year she also started teaching introductory biology/computer science courses, as a teaching assistant. Ida is a big advocate for her daily evening river walks with friends to wind down after her day. In her free time you can find her playing IM volleyball, sailing if it's warm enough, or accidentally falling into hours-long conversations with her friends on random Winthrop staircases. Ida is so excited to meet you all soon!



**Rishabh Ghosh** is a third-year student at Harvard University studying Biology and Mathematics. He plays poker and chess in his free time and is co-captain for Harvard's Cricket Team. Rishabh is super passionate about markets, and is interning at IMC Trading this summer. He has been a teaching assistant for a multitude of classes, including Math 23, Math 152, and LS50. A huge advocate for IM sports, Rishabh can be found court-side with incredible frequency. Next year, he plans to do research at Harvard Medical School on using transformers for medical data.

## Instructor Fellows



**S Sri Varsha Reddy**, a third-year Electrical and Electronics Engineering student at Osmania University in Hyderabad, is fueled by curiosity. Growing up in a lively city, she excels in hands-on learning and has made significant contributions to projects such as an autonomous drone and an electric two-wheeler vehicle. Beyond her academic pursuits, Varsha plays pivotal roles in student clubs, particularly in organizing events for the Women in Engineering and Power & Energy chapters of IEEE OU Student Branch. Serving as the Head of Events and Competitions in the E-cell and as a key member of the Alumni Association's student body, she enriches her college experience. Outside of academia, Varsha, a self-proclaimed coffee enthusiast, enjoys exploring new places and indulging in her obsession with coffee by experimenting with new recipes. This dynamic blend of interests, along with her love for reading books across a wide range of genres, showcases the richness of her college experience. As she often says, "Embrace the challenges, sip your coffee, and let the adventure unfold!"



**B Vamsha Vardhan Reddy**, a fourth-year Computer Science and Engineering student at Osmania University, is a student trainee in Artificial Intelligence and Machine Learning at IIIT Hyderabad. As the Section Student Representative for the IEEE Hyderabad Section and the Vice-Chairperson of the IEEE OUCE Student Branch, he contributes significantly to his local and university communities. Involved with the OUCE Alumni Association and TEDxOsmaniaU, Vamsha values connections beyond academia. His active participation in various events demonstrates his commitment to fostering a vibrant community. He enjoys sports, diverse cuisines, and traveling, seeking to explore new cultural experiences. Balancing academic excellence with community involvement, he exemplifies a well-rounded individual dedicated to both personal growth and societal impact. In his view, every moment is an opportunity to kindle the flame of passion and share its warmth with others.



**Renu K**, a senior in Biomedical Engineering at Osmania University, is currently engaged in research on robotic-assisted medical procedures. As Vice Chair for the Women in Engineering club and Ed-Cell, she actively promotes diversity and nurtures entrepreneurial journeys on campus. Beyond academics, she is a designer collaborating with brands like Cred and OnePlus, contributing as an animator and content curator. Her joy lies in crafting experiences that merge art and technology, reflecting her unique fusion of these realms. Particularly drawn to the intersection of design and assistive technology, she is dedicated to developing user-centric solutions informed by her knowledge of human physiology. This passion drives her to go beyond aesthetics, aiming to enhance lives through purposeful designs.



**Nuti Naga Sree Vaibhavi**, a senior student pursuing a Masters in English Literature at University Post Graduate College, Osmania University, has completed her Diploma in Education and successfully cleared the Central Teacher Eligibility Test conducted by the Central Board of Secondary Education. As a strong proponent of honesty, she seeks to approach challenging tasks with composure and seeks support from her peers to find solutions. She is keen on learning new perspectives and gaining knowledge from her surroundings. She thrives when dealing with challenges and believes deeply in teaching, learning and growing collectively. She enjoys spending time with her friends, reading books and poetry, watching movies, and cooking.



**Gayathri Vailla**, a third year student at Osmania University studying Electrical Engineering, is an active individual who enjoys exploring new things and excels at adapting to a wide range of situations. She is a YOUVA volunteer at a student-run NGO and participates in Xplore OUCE. In addition to her love for photography, she is an enthusiastic cricket fan who enjoys watching and discussing the sport. She has even played cricket at university level for the past two years. She loves listening to music, enjoying spiritual stories, watching movies, and firmly believes in the philosophy that 'Everything will happen at a pace that the universe feels is right for you'.



	1/8	1/9	1/10	1/11	1/12
	Monday	Tuesday	Wednesday	Thursday	Friday
8:00 AM	<b>Breakfast</b>				
8:30 AM					
9:00 AM	<b>Intro to PSIL/Lecture 0</b>	<b>Lab 1</b>	<b>Lecture 3</b>	<b>Lab 4</b>	<b>Instructor Panel</b>
9:30 AM					
10:00 AM	<b>Lab 0</b>	<b>Extracurricular 2</b>	<b>Lab 3</b>	<b>Lecture 5</b>	<b>Capstone</b>
10:30 AM					
11:00 AM					
11:30 AM					
12:00 PM	<b>Lunch</b>				
12:30 PM					
1:00 PM	<b>Lecture 1</b>	<b>Lab 2</b>	<b>Lecture 4</b>	<b>Lab 5</b>	<b>Talent show prep</b>
1:30 PM					
2:00 PM	<b>Lecture 2</b>	<b>Extracurricular 4</b>	<b>Lab 5</b>	<b>Talent show</b>	<b>Talent show</b>
2:30 PM					
3:00 PM					
3:30 PM	<b>Tea Break</b>				<b>Tea Break</b>
4:00 PM	<b>Extracurricular 1</b>	<b>Extracurricular 3</b>	<b>Office hours</b>	<b>Extracurricular 5</b>	
4:30 PM					
5:00 PM	<b>Office hours</b>	<b>Office hours</b>	<b>Prep time</b>	<b>Office hours</b>	<b>Social gathering</b>
5:30 PM					
6:00 PM	<b>Prep time</b>				<b>Social gathering</b>
6:30 PM					
7:00 PM	<b>Dinner</b>				
7:30 PM					
8:00 PM	Students retire to their dorms				



## **The Essentials of Entrepreneurship, *Shefali Prakash***

Elon Musk, Bill Gates, Dhirubhai Ambani, and Narayan Murthy. What do all these names have in common? They are all some of the world's greatest entrepreneurs who have changed the course of history. But what even is entrepreneurship? Entrepreneurship is the key force of innovation that brings about societal progress. Everyone has it in them to be an entrepreneur, because entrepreneurship is just a problem-solving mindset. It is simply a way of thinking. It is not only recognizing that problems exist in the world, but it is a way of seeing solutions that others may not have. This lecture will introduce students to the fundamentals of entrepreneurship and seeks to inspire students to adopt an innovative mindset when addressing the problems around them.

## **The Art of Public Speaking, *Lap Nguyen***

Public speaking is a critical component of leadership and being able to convey ideas and pitch oneself effectively. In this lecture, students are first given the key tools of what comprises an effective speech from rhetorical elements such as pathos, logos, and ethos to building a structure that maximizes impact. Students will then utilize these tools to make an effective elevator pitch that they can use when applying for jobs and scholarships. Finally, they will be given tools needed for an effective delivery of the speech. The goal is for them to effectively pitch themselves to their classmates.

## **Life Skills and Envisioning An Authentic Future, *Lindsey Lawson***

Welcome to an engaging and enlightening lecture on Life Skills and Envisioning an Authentic Future. In this session, we'll delve into the fascinating realm of psychology, exploring concepts crucial to personal growth and success. We'll start by unraveling the art of self-regulation, understanding how to navigate the ebb and flow of life while honing the ability to adapt to internal and external changes gracefully. Delving into the concept of "flow," we'll discuss the optimal state of engagement and fulfillment. Additionally, we'll explore the Circle of Concern, distinguishing between what you can and cannot control, empowering you to channel energy effectively. As we navigate this journey, we'll highlight the importance of cultivating personal agency, mastering communication skills, and creating a healthy environment for yourself to thrive. We will also delve into the way we think about the future. Leadership will take center stage, prompting you to reflect on the type of leader you aspire to be, encompassing both personal and community leadership. To tie it all together, we'll introduce two tools (1) for setting short and long-term goals across various dimensions of your life, and (2) for identifying students' unique skill sets.

## **Mission: Brain & the Concept of (False) Memory, *Ida Kozuchowska***

In the beginning of 21st century, we observe a rapid decline of memory-related potential among almost all age groups, most likely a response to Internet and web-based resources becoming much more accessible to a larger part of the population. The ability to instantly check information or to rely on device memory contributed to significantly lesser development of cognitive abilities in above mentioned communities. Nevertheless, memory is often one of the most precious attributes of a human being: for some it's remembering the moments we spent with close ones, to some succeeding academically, and most commonly one extensively uses memory for both. This seminar will introduce the students to the concept of memory formation and memory loss from the neuroscientific perspective, but also the creation of false memories or how we can take ownership of our own memory and keep improving its functioning over the years. The lecture will serve as both a glimpse into the field of neuroscience, provide the students with a better understanding of their own mind as well as equip them with memory techniques that can guide them during their future academic and professional path.

## **Probability, Paradoxes, and Problem Solving, *Rishabh Ghosh***

In this lecture on "Probability, Problem Solving, and Paradoxes," students will discover the fundamental principles of probability and how they form the basis for predicting outcomes in various real-life scenarios. They will hear a story on Benford's Law, gaining insights into its intriguing applications in fields such as forensic accounting and data integrity analysis. Through the study of conditional probability, students will learn how to assess the likelihood of an event occurring in the presence of certain conditions or factors. Engaging with a variety of brainteasers, students will sharpen their problem-solving skills and appreciate the often counterintuitive nature of probability and paradoxes. Additionally, students can apply these concepts to understand and manage everyday situations, from making informed financial decisions to assessing risks and opportunities in their personal and community lives. This exploration will not only enhance their mathematical acumen but also empower them with critical thinking skills applicable in a multitude of real-world contexts.



## **Self-Defense and the Art of Karate**, *Shefali Prakash*

Self-defense is such an important part of every person's life. By knowing the basics of martial arts, you will be able to defend yourself and others during crucial moments. Beyond just being able to protect yourself, knowing karate helps you stay physically fit and emotionally alert, and also boosts your self-esteem and confidence. Join us in learning the art of self-defense!

## **The Art of Debate**, *Lap Nguyen*

Debate is more than argumentation. It is the ability to structure your ideas in a persuasive and impactful manner quickly. Students will be encouraged to utilize the skills learned in the Public Speaking lecture to build arguments that can help them solve issues within their school and community. They will first practice with simple topics designed to reinforce rhetorical and persuasive skills before being asked to debate and offer solutions on how to resolve the issues they face every day.

## **Winning with Words: Volleyball and Communication**, *Lindsey Lawson*

Discover the joy of volleyball in our exciting extracurricular program! Join us for a dynamic team sport where fun takes center stage. Through engaging activities, we'll not only work on building the foundations of volleyball skills but also emphasize the importance of effective communication on the court. Get ready to bump, set, and spike your way to success while forging new friendships and enjoying the thrill of friendly competition. This is more than just a game—it's an opportunity to have a blast, enhance communication skills, and establish a solid foundation in the exciting world of volleyball. Join us for an enriching experience where teamwork and fun go hand in hand!

## **Basics of Latin Dance!**, *Ida Kozuchowska*

Originating from Dominican Republic, Cuba or Brazil, Latin social dance has won the hearts of many across the entire globe, including one of our instructors, Ida. Social dancing is a beautiful medium to connect with others despite language barriers or background differences, and a skill universal to people of all ages and backgrounds. This activity will introduce you to basic steps of Latin social dances, and partner dancing more broadly, and you will have the chance to learn a more individual approach to Latin dance as well.

## **Ultimate Frisbee**, *Rishabh Ghosh*

Ultimate Frisbee is an energetic team sport that emphasizes sportsmanship, combining elements of soccer and basketball, played with a frisbee. Teams score points by catching the frisbee in the opponent's end zone, advancing the disc through passes, without the player in possession running with it. The game starts with a 'pull' and switches possession if the frisbee is intercepted, dropped, or goes out of bounds. Physical contact is minimal, making it inclusive and safe. Ultimate Frisbee is unique for its focus on encouraging fairness and respect.



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# NOTES



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