Center for Excellence in Education

Research Science Institute 2026 - International

Ansh Kumar

L & T Serene County, Gachibowli, Hyderabad, Telang

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Forms

Ia. Applicant Information

* indicates a required field

To be completed by applicant. Please provide complete and accurate details on yourself. If you did not enter your complete address and contact details upon account setup with Slideroom, please go back and do so now.

1. Name

Last Name (Surname)	First Name	Middle Name	Preferred Name
Kumar	Ansh		

2. Date of Birth

Please enter in this format mm/dd/yyyy

01/02/2009

2.1. How old will you be on July 1, 2026?

While CEE does not discriminate on the basis of age, insurance and laboratory regulations require certain protocols based on age, and unfortunately our application system does not make it easy to calculate age based on birthdate above. Please select or enter your age on July 1 2026 as an integer, and it will be used only for these compliance purposes if you are selected.

17

3. Legal Sex

Please respond to this question with the sex that is indicated on your birth certificate, driver's license, or other similar government documents that are currently considered authoritative.

Male

4. Gender

Man

5. Permanent Address

Where you primarily live (may or may not be where you get mail) when not at school. If you attend a boarding school, please list your "home" address (if you have one that is different); you will be able to enter your school address later. If you split significant time between two residential addresses (e.g. between parents/guardians), you may enter both as rows.

Street	City	ZIP
L & T Serene County, Gachibowli, Hyderabad, Telang	Gachibowli	50032

6. State/Territory of Residence

Please list the state or territory where you permanently reside. If you attend a school out of state, you will have the chance to enter that in the next screen.

I live outside the United States

7. Country of Residence

India

8. Country of Citizenship

If you are a citizen of multiple countries, please pick the one with which you most closely identify; however, if you are an American citizen, select United States.

India

8.1. Immigration Status (if not a US Citizen)

I am not an American citizen and I do not reside in the United States

9. Current Secondary School Grade Level:

Select the applicant's secondary grade school level at the time of application:

11

10. Expected College Start Date

Please indicate the month and year you intend to begin college. You can select the first of the month by convention, if you are unsure what day of the month your college will begin.

08/01/2027

11. Home Phone Number {Example: (703) 555-1220; (011) 34 91 555-1220}

91 9502243375

12. Permanent Email Address

Give us an email address that will work for you indefinitely. Please do not provide school e-mail address.

anshkumar0201@gmail.com

Ib. Family Information   * indicates a required field

Please complete this information for all parents/guardians and siblings. You may want to consult with a parent or guardian to make sure the information below is complete and correct.

1. Parent/Guardian 1 - Name, Gender and Relationship

Please enter the full name, including title (Ms., Mrs., Mr., Dr., etc.), for parent/guardian 1. Please also include their gender (female, male, other) and relationship (mother, father, guardian, etc.).

Title/Prefix	Given/First Name	Family/Last/Sur Name	Gender	Relationship
	Chinmayi	Sahu	Female	Mother

2. Parent/Guardian 1 - Contact Details

Please indicate the preferred contact email and phone number for parent/guardian 1. If the student attends RSI, these will be used as emergency contact details.

Preferred Email	Preferred Phone
simransah2003@gmail.com	9160084661

3. Parent/Guardian 1 - Address

For parent/guardian 1 listed above, please indicate address.

Street Address	City	State/Province	Postal Code	Country

| Telecomnagar, Gachiboqli | Hyderabad | Telangana | 500032 | India |

4. Parent/Guardian 1 - Occupation

Please indicate parent/guardian 1's occupation. If your parent 1 works multiple jobs, or holds multiple concurrent appointments, please list up to three.

Position/Title	Employer/Institution
Homemmaker	

5. Parent/Guardian 1 - Education

Please list the highest degree of education attained by this parent.

Master's degree

6. Parent/Guardian 2 - Name, Gender and Relationship

Please enter the full name, including title (Ms., Mrs., Mr., Dr., etc.), for your second parent/guardian. Please also include their gender (female, male,other) and relationship (mother, father, guardian, etc.).

Title/Prefix	Given/First Name	Family/Last/Sur Name	Gender	Relationship
	Pradeep	Kumar	Male	Father

7. Parent/Guardian 2 - Contact Details

Please indicate the preferred contact email and phone number for parent/guardian 2.

Preferred Email	Preferred Phone
pradeep2000@gmail.com	+1 (470) 461-7931

8. Parent/Guardian 2 - Address

For parent/guardian 2 listed above, please indicate address.

Street Address	City	State/Province	Postal Code	Country
6620 Firefly Lane	Montgomery	AL	36116	United States

9. Parent/Guardian 2 - Occupation

Please indicate parent/guardian 2's occupation. If your parent 2 works multiple jobs, or holds multiple concurrent appointments, please list up to three.

Position/Title	Employer/Institution
Program Director	Infinite Computer Solutions

10. Parent/Guardian 2 - Education

Please list the highest degree of education attained by this parent.

Master's degree

11. Siblings

Please include the full name (First and Last), age and gender of your sibling(s). (Example: John Doe - 12 - Male)

12. Do you qualify for free/reduced price lunch?

In the United States, the National School Lunch Program (NSLP) provides eligible students with free or reduced-price lunch (FRPL) based on income. Students from households with incomes at or below 130 percent of the Federal poverty line can receive a free lunch.

No

13. Has anyone in your family previously attended a CEE program? If so, which program?

CEE programs include RSI and the USA BioOlympiad (USABO).

No

Ic. Secondary School Information   * indicates a required field

To be completed by the applicant or the applicant's guardian. If not known, this information should be publicly available from the applicant's secondary school:

1. Please enter your schools CEEB code:

Please enter or search for your secondary schools CEEB code. If your school does not have a CEEB code, please select "School not found" and enter your secondary school details.

671657 - Sreenidhi International School - Hyderabad, IN

2. School Mailing Address

Street Address/POBox	Postal/ZIP Code	State	Country
Aziznagar Village Rd, near TS Police Academy, Moinabad	500075	Telangana	India

3. School Contact Info

Telephone number	Email Address	Website
99122 44409	info@sis.edu.in	https://sis.edu.in/

4. School Official

CEE requires the contact information of a leader at your school or district. This may be a Principal/Acting Principal, Headmaster or Head of School, Director, Superintendent, or other Chief Administrator.

Official's Title	Official's Full Name	Official's Email	Official's Phone #	Official's Prefix

| Head of School | Malcolm Nicolson | hos@sis.edu.in |

5. Do you attend school in the same state/territory as your permanent address?

Yes

6. Do you attend an DOD/APO AE/FP school?

The Department of Defense Education Activity, or DODEA, operates 160 schools serving K-12 students. DODEA's eight districts are located in 11 foreign countries, seven states, Guam and Puerto Rico. These schools may not have standard addresses or CEEB codes, so we try to make sure we can identify and annotate them correctly.

No

7. Comments (optional):

You may optionally add brief clarifying remarks here, for example if you attended multiple schools.

IIa. Applicant Research Preferences

* indicates a required field

The applicant should indicate first and second choices for research fields. These should be TWO DISTINCT FIELDS and the student should have some academic or research experience in them. For each of the two research field choices, select one sub-field within the chosen discipline. (Examples might be the sub-field of genetics within the field of biology; the sub-field of condensed matter physics within the field of physics, or the sub-field of number theory within the field of mathematics).

1. First Research Field:

Choose from one of the following, or else write in your own field. The RSI selection committee will look favorably at applications where the declared fields and sub-fields of interest align with the applicant's previous academic coursework and extracurricular activities as highlighted below (in the remainder of Part II of this application):

Bioengineering

1.1. First Research Sub-Field

Please specify a sub-field within the field chosen above — for example, immunology, genetics, bacteriology, proteomics, organic synthesis, atomic physics, cosmology, graph theory, machine learning, nanomaterials, quantum computing, photonics, physical oceanography, structural mechanics, etc.

Oncology

2. Second Research Field:

Choose from one of the following, or write in your own field. This research field should be distinct from the research field chosen above:

Cognitive Science/Neuroscience

2.1. Second Research Sub-Field

Please specify a sub-field within the second research field chosen above. This sub-field should of course be distinct from the first choice above:

Developmental Neuroscience

IIb. Applicant Personal Statements

* indicates a required field

1. Why did you choose these research fields?

Articulate why the research fields chosen on the previous page are intriguing and exciting to you. For each sub-field, state what you perceive as the one or two most interesting questions or problems in this area. Explain why these sorts of questions interest you. Your responses are shared with mentors. Please respond with clarity and specificity, including what specific prior research/coursework/etc experiences have prepared you to "hit the ground running" in these fields at RSI.

As a young child, I was captivated by a single problem: by what means can we restore natural, instinctive movement to those individuals whose nervous systems no longer function the way they once used to? Thus, I chose neuroscience and biomedical engineering.

This interest initially piqued when I learned that my grandmother's sister was diagnosed with Parkinson's Disease. My grandaunt, who once moved around with ease was struggling with elementary movements--holding a spoon, standing up without assistance, putting on clothes. Yet, this wasn't what hurt me the most, what hurt was the tiredness in her eyes. Parkinson's is commonly described through its symptoms, but what I saw was the disease's true cost: one's gradual loss of autonomy. This became my motivation to understand why the body fails to function and follow its own intentions.

My newfound motivation led me towards the field of neuroscience. The only way to understand the root problem was to analyse the brain's language: electrical patterns, motor function, and feedback loops, the victims of Parkinson's. This investigation thus led me to biomedical engineering, helping me discover something even more powerful: the ability to build tools that could repair, supplement, or manipulate those failures.

This led to the genesis of the question that drives my investigation in this field today: Is it possible to innovate a closed

feedback loop system with real time adjustments that reduces input and output delays between the neural pathway and motor output to restore smooth motion?

The above problem is encapsulated in three aspects that I want to pursue at RSI:

1. Neural signal deciphering and prediction

Tremors induced by Parkinson's disease are best represented by unstable oscillations. By understanding EMG patterns, neural impulse systems, and the frequency of tremors, tremor phases can be predicted before the next one occurs. The challenge however, finding essential patterns hidden in this pathway, is one of the most fascinating puzzles I have ever encountered.

2. Feedback delay in facilitative devices

As a part of IB, I had to work on my Personal Project, a core component of my MYP certificate. Whilst conducting research, I discovered that most wearable devices respond after the tremor has taken place, leading to a loop where the system overcorrects. By studying control systems through tools like MATLAB and SIMULINK, I realised how a tiny delay can impair an entire system. Thus, a question arose: by what means can we develop biological systems that make up for biological delays while maintaining fluid motion? By blending physiology, engineering principles and physics, I discovered the field I was meant to contribute to: biomedical engineering.

3. Adaptive, feedback based biomedical systems

For millennia, us humans have had to adapt to ever changing environments, and it is of second nature to us. Unfortunately, most assistive technologies currently don't adapt to our ever-changing needs. What's of interest to me is whether an adaptive system, one that adapts as severity of symptoms change, could ensure a seamless treatment experience. I am looking forward to exploring the frontier of combining our understanding of neuroplasticity and engineering principles under an RSI mentor.

To "hit the ground running" in these fields, I've worked with technologies like MATLAB and Simulink to model feedback loops and delays in the human body. Secondly, I have conducted research studies spanning various fields such as

oncology, with research on medical imaging in oncology, as well as my research on Parkinson's Disease. My coursework in the IB programme meets the requirements for the chosen fields, with advanced coursework in the STEM subjects. Additionally, I have led a bioengineering NGO that provides accessible content through social media platforms, ensuring that I spread my knowledge to as many individuals.

All in all, these experiences have laid the technical foundation and motivational drive for me to pursue my goal to conduct research that improves human health. The environment at RSI--where intellectual curiosity meets tangible impact--is right where I want to take this passion of mine.

2. What are your long-range goals?

One of my primary long range goals has been to become a biomedical engineer, developing technologies that restore fundamental physiological functions, giving back individuals their autonomy and dignity. The core of this goal lies in a very simple belief of mine, if a person loses control over their body, they lose more than just mobility, they lose self-confidence, independence, and can't do most things that we take for granted, and I want to dedicate my life to changing that.

In the future, once I get to college, my plan is to pursue a bachelor's degree in biomedical engineering, focusing on motor disabilities, neural pathways, and adaptive biological systems. My dream is to work in a field combining engineering and clinical applications, to develop tools that don't just remain unused prototypes, but actual tools that society can use.

Designing an adaptive closed-loop biomedical device with extremely low latency has been a major ambition of mine. I want to enable individuals to have fluid and instinctive movements rather than having stiff and unfree mobility. I have a particular interest in technologies that can analyse biological signals--like muscular or neural signals--before symptoms get a chance to manifest, by using predictive algorithms and adaptive systems. I hope that such technologies can restore natural mobility in patients with diseases that debilitate movements.

As someone devoted to social welfare, another goal of mine is to minimise the gap between advanced medical technology and large-scale accessibility. My grandaunt, a patient with Parkinson's, has access to basic-level healthcare, but still faces adversities in obtaining the advanced treatment that she requires. This unfortunate reality fueled me to find a larger purpose: medical innovations shouldn't be available to those who can afford it or live in

certain nations. I aim to create innovations that aren't just effective, but also economically viable, making them accessible to patients with limited resources.

In the future, I aim to found a biomedical company that focuses on creating effective, low-cost supportive devices evaluated by patient feedback and clinical evidence. I plan on ensuring an ecosystem where medical professionals, engineers, and patients work together, making sure that every product reflects technological mastery and meets human necessities.

Apart from biomedical engineering and entrepreneurship, I want to educate and be someone who advocates, inspiring younger generations to see the biomedical field not as daunting, but rather as a means to create a profound impact on the lives of countless people. Currently, through my bioengineering NGO, I have garnered an understanding of how powerful it is to make scientific knowledge accessible, and I want to expand this mission of mine on a large, global scale.

In the long run, my goal is for the work I do to give back individuals the freedom they lose when their body fails: lifting a cup without trembling, moving with no hesitation, writing down their name with perfect handwriting, to be able to trust the beauty that is their body. My long term goal is not just to understand the human body, but to help restore, develop, and maximize it, and honor those whose lives depend on it.

3. What activities and/or hobbies demonstrate your leadership, creativity and uniqueness?

Through the communities I build and the ideas I bring from the drawing board to real life, I try to express three qualities: leadership, creativity, and uniqueness. What defines my individuality is not simply the activities that I participated in, but those in which I was a leader, where I created something new: an organisation, a group of members, an innovation, or a new path.

One of the major ways I have expressed my leadership is the bioengineering NGO I founded. It's called the Young Biomechanics Institute, and although it started off as myself and a friend posting reels, posts, and blogs online, it has now grown to over 100 volunteers and has reached hundreds of thousands of students across the world. Our organisation began as a small effort to spread awareness about bioengineering to as many people as possible, but it evolved into a global means for accessible STEM awareness. Being the founder of this organisation taught me how to guide a large, diverse group of motivated individuals, with emotional maturity, directionality, and lucidity. I coordinate

R&D teams, mentor video editors and content creators, and create systems that ensure the organization's members, no matter from what background they may be, play an active role and feel empowered in the process. The creativity required to transform complex biomedical concepts into short, attention-capturing stories, changed the way I think of science, it isn't just about knowledge, but about storytelling. The Young Biomechanics Institute is a reflection of my belief in leadership not as a means to show off power, but as a means to enable others to succeed and develop.

The summer of 2024, I partook in a research internship at the University of California, Merced. The research I did there focused on Parkinson's Disease, highlighting an important aspect of my leadership: intellectual initiative. In my time in UC Merced, I learned how to conduct literature reviews, analyse data, and form educated hypotheses alongside fellow researchers. The uniqueness in the experience lied in the way it deeply connected me to my personal story. As someone with a family member with Parkinson's, the research I was conducting had an additional emotional weightage and urgency. I found myself constantly questioning things, volunteering for additional research, and stepping into autonomous roles, where I wasn't just doing what I was assigned, but where I was shaping the my own learning.The experience taught me that being a leader in the scientific field means not just curiosity, but also responsibility: it encompasses being willing to pursue hypotheses with autonomy and modesty.

My creativity lies not just in the lab, but also in the way I build communities and display problem-solving skills. My second organisation, 'Ankuram', reflects this. My organisation focuses on the welfare of the underprivileged through career building programs. Founding this organisation required alternative types of creativity: designing programs for students unfamiliar with careers, and making them culturally sensitive and profoundly impactful. Developing long-term plans of action, ensuring smooth logistics, and leading team members taught me to think beyond short term necessities and focus on long term solutions. Ankuram taught me that creativity lies not just in artistic articulation, but in the imagination of a better world, and building the things required to achieve it.

Shadowing a hospital's oncology department also played a key role in shaping my leadership and uniqueness. Being able to observe cancer through an emotional and technical lens taught me the significance of calmness, communication, and empathy. Though I did not have a leadership role at the hospital, I actively developed leadership qualities: being a good listener, a thoughtful observer, and respecting the vulnerability of the patients and their close ones. The shadowing gave me a deep respect for the emotional side of scientific and technological innovation, strengthening my belief that creativity in the biomedical field encompasses being able to connect, understand, and comfort.

Across all the activities I have done runs a common thread: I choose roles where I can develop, uplift, and innovate. Whether I am building an organisation from scratch, contributing to groundbreaking research, improving the welfare of underprivileged communities, or learning from professionals in oncology, my approach to everything remains constant: I must use the tools that I am privileged to have to improve conditions for society in the long run.

4. Describe your participation in extracurricular or community outreach activities?

My extracurricular and community outreach activities showcase my desire to build communities that are curious, collaborative, and provide a sense of belonging. Regardless of whether they are academic, leadership, or cultural based roles, I choose roles that allow me to bring about opportunities for others: where I can help individuals discover their passions, be a part of a community, and grow autonomously.

Founding my school's research club is one of the most significant initiatives. I observed that there were a plethora of students in my school that were fascinated by scientific research but had no means to engage in various research initiatives, literature reviews, and long-term projects. This eventually led me to creating the research club. The curriculum I designed was from scratch: sessions on forming hypotheses, finding credible papers, designing scientific experiments, and presenting findings. Mentoring over 50 young students through the initial research projects, guiding them to channel their curiosity and analyse results. Creating this club taught me the power in creating pathways where none existed before, and how community outreach can develop just by giving individuals the right environment to showcase their curiosity.

Being the Jupiter House Captain in my school gave me the opportunity to contribute to the school community on a significant scale, leading over a hundred students in the house. While my leadership role in this position involved sporting activities and academic prowess, a large portion of the role encompassed organising school events, strengthening school spirit and shaping the memory of the student body. I planned and coordinated cultural events, ensuring that these events were safe, inclusive, and enjoyable whilst honoring their cultural significance. Organising the school's Annual Day was another one of my key roles in the position, as I helped manage theatrics, student body participation, even logistics, and backstage coordination. These events taught me how I could build communities outside just classrooms, and how community-building also lies in the experiences where students perform, celebrate, and connect to things larger than themselves. Being a part of the team that brought these events to life highlighted the importance of creativity, logistics, and the diversification of students under a common goal.

Another significant part of my community outreach experiences are my Model United Nations (MUN) experiences. Apart from being a delegate in over 15+ conferences, I have devoted countless hours mentoring younger delegates, preparing them for their conferences, developing their public speaking and debating skills, and crafting speeches. I have noticed that many younger students find their first MUN daunting, so I work with them to decipher complex global challenges into understandable portions. The final result--being able to witness new delegates confidently give speeches--has been one of the most rewarding outcomes of the mentorship process. Through my experiences in MUN, I have learned that students must not be guided academically, but also emotionally, by helping them overcome adversities and discover their own strengths.

Lastly, adding to my academic and cultural involvement, I contribute to my school community through student led academic support and collaborative study groups. I found that being academically gifted is an advantage, which I should maximise as much as possible, thus leading me to initiate these groups. My particular strengths in the STEM fields allows me to support my peers across all high school grades, and make learning more accessible for them. Holding content review sessions before exams, sharing student-curated study guides, and working with my fellow peers have allowed me to inculcate outreach into everyday activities.

Across all the activities I have done, founding the research club, being in and heading organising committees of my school events, mentoring delegates and providing academic support to my peers, lies the core reason behind my involvement. My outreach lies in the principle that leadership is not simply a role, but a responsibility where I will uplift members, build lasting relationships, and leave lasting impacts on the communities I am a part of, both in RSI and outside it.

5. How did you hear about RSI?

Check all that apply. This will not impact your selection decision, we just want to know how people are learning about RSI to know if our outreach is working.

Social media

6. Why are you applying to RSI? What aspects most appeal to you?

Please tell us in more detail about how you learned about RSI and why you chose to apply. What makes this the way you want to spend your summer?

RSI is one of the few places where my ambitions can be matched by supposition--where curious individuals like myself will not just be trusted to learn about scientific investigation, but actually partake in it. The program will offer me the rare opportunity of being able to contribute original research and innovations at a standard where curiosity is treated as responsibility, the exact environment that I have been seeking.
What appeals to me most about the program is its belief that students shouldn't just be observers, but should actually be contributing. I want to spend my last summer as a high school student doing something meaningful: wrestling problems that don't yet have answers: constantly forming new hypotheses, facing adversities and uncertainties, and pushing the boundaries of knowledge as we know it. This experience matters far more to me than accumulating qualifications; it is the means through which I hope to grow as a scientist.

RSI is especially compelling to me because it would serve as a means to pursue research combining the fields of neuroscience and biomedical engineering, fields that are technically dense yet profoundly human. My interest in these fields are not abstract, they arise due to my grandaunt's suffering due to Parkinson's disease. Witnessing the gap between intention and output gradually grow made her adversities impossible to ignore. I am motivated to understand this gap--and, eventually, close it.

Equally important to me is the community at RSI. Working alongside likeminded peers motivated not by recognition but by genuine passion, who intellectually challenge each other and take delight in rigor. A community where quality is assumed and collaboration is valued would allow me to think at a deeper level, and ask important questions. RSI represents not just a summer program, but a turning point, one where I pave a path toward a life where research exists not just to discover, but to matter.

IIc. Course Work

In the reference section, the applicant will indicate a school counselor or official who will submit school transcripts on the applicants' behalf. On this page, the applicant should specify any additional mathematics, science, computer programming or engineering coursework that have been completed, or will be completed as of June 2026, beyond what is covered in the transcripts. Expected or actual dates of completion may be approximated (within a window of a few weeks):

1. STEM coursework experience

While RSI does not have a formal pre-requisite curriculum for *any* research area, the selection committee would like to know if you have any experience in the following core areas of math and science. Please check the box next to the field if you will have completed any high school (or higher) coursework in these areas by the end of your junior year. Again, every student may not have the chance to take all of these courses by the end of 11th grade.

Physics|Biology|Chemistry

2. Computer Skills

Please report your familiarity with: commonly-used operating systems; programming, scripting, or markup languages; or analysis packages or environments.

While CEE does not require fluency with any particular programming language, it is strongly recommended that applicants have some experience with a tool or framework that facilitates the ability to model systems, perform symbolic or numerical mathematics, and/or analyze data. Python, MATLAB, Mathematica, R, Java, or C/C++ are common choices.

For each language, framework, or program, please indicate your level of experience as either Beginner, Intermediate, or Advanced. Beginner experience implies some exposure or occasional past use; Intermediate experience implies moderate exposure or frequent use; Advanced experience suggests development expertise or extensive use in one or more significant projects.

Language/package/etc	Level of experience
MATLAB	Beginner

2.1. Further experience, if any

Briefly describe any past or ongoing experience with computer programing, modeling and/or data analysis you indicated an Intermediate or Advanced level of familiarity with in questions 2 and 3, addressing both questions posed and methods and tools employed.

Utilised MATLAB for a research paper on Parkinson's Disease, where i utilised the Siimulink tool in MATLAB to model a closed feedback loop of an individual with Parkinson's, and used an adaptive DBS system to supress the tremors.

3. Additional STEM Courses

Please indicate any courses, not covered in your transcripts, that were taken in math, science, computer programming and/or engineering. This could include, but is not limited to, courses taken at a local community college or university, during the summer, and/or online. Please indicate course subject, where the course was taken and the date the course was (or will be) completed. (E.g. Physiology - University of Virginia - June 2025)

4.
Please provide any other information regarding your academic performance or context which might be relevant

Please let us know if there are any notable opportunities or barriers that have meaningfully enhanced or constrained your ability to take classes, undertake research, or otherwise pursue your intellectual interests and aptitudes. For example, you might explain any opportunities for advanced study that your school offers that you have taken advantage of, or conversely, that your school lacked. This question is optional.

IId. Standardized Test Scores

Though no particular standardized tests are preferred, at minimum the PSAT is strongly recommended. The applicant should self-report his or her best-standardized test scores here. Be sure to include the date of administration for each exam listed. Copies of official score reports for all tests administered by the College Board, APs, ETS or ACT, Inc, etc should also be uploaded as a PDF (one document max) at the bottom of the page.

1. PSAT Scores

Please indicate the date of your exam, your overall score, evidence-based reading and writing score and your math score below

2. SAT Scores

Please indicate the date of your exam, your overall score, your evidence-based reading and writing score and your math score below. If you took the Essay Portion, please indicate that score as well. If you took an earlier version of the exam, indicate your exam dates and scores in the comment section at the bottom of the page.

Overall Score	Reading and Writing	Math	Essay	Exam Date (mm/yyyy)
1510	720	790		11/2025

3. ACT Scores

Please indicate the score you received in each section in the table below. In the follow up question, please indicate the exam date and composite score.

4. AP Exams

Please enter details for any AP exams you have taken in the table below. In the first column list the test subject, your score in the second column and the test date (mm/yyyy) in column three.

5. TOEFL Scores (International Students Only)

Please indicate your overall score and the score you received in each section in the table below. In the follow up question please, indicate your exam date.

6. Other National or International Exams/Tests:

Please enter details on any other standardized exams or test taken below. These could include other international curricula (like the IB, IGCSE, CAPES, IELTS, DuoLingo, etc), or some international exams. In the first column list the exam/test name, your score in the second column and the exam/test date (mm/yyyy) in column three.

7. Score Upload

Please attach a PDF of your test score report (this should be the official copy you received from the testing service that administered the test) you self-reported above. Include all test scores you intend to share in one PDF file.

digital_sat_k12_student_weekend_140411805_d7fdb5c0-803d-4cd4-8307-32ee343d8685.pdf

IIe. Applicant Awards and Accomplishments

* indicates a required field

The applicant should concisely list awards, achievements, activities, and accomplishments in academics, research, and extracurricular activities. Please include approximate dates, but prioritize by importance rather than sorted chronologically, so that any national or international awards are showcased.

Do not send CEE a supplemental resume or curriculum vitae. Further details of activities of particular significance to the applicant may be explored in the Personal Statements:

1. Science Fairs, Competitions, or Programs

If you have done so, please indicate science fairs and competitions to which you may have submitted work or otherwise participated in. Please note CEE neither presumes nor requires that you have presented work at a science fair or competition; this is just a form to gather data in a structured way.

State/Regional Science/Engineering Fair Finalist|FIRST|Conrad Spirit of Innovation Challenge

2. STEM Olympiad Distinctions

Please indicate your participation in any of the following math and science olympiads (not including SciOly). Please note that, as above, CEE neither presumes nor requires previous scientific olympiad experience to attend RSI.

Harvard Undergraduate Science Olympiad. International Research Olympiad

2.1.

Please briefly describe other STEM olympiads in which you have been involved and any distinctions earned.

3.

Please list (concisely) other major awards, activities, and accomplishments in science, technology, engineering, or mathematics:

Give some measure of the extent of participation and accomplishments, and awards or recognition received, in STEM-related areas, including for example: olympiads, academic bowls, math competitions, science fairs, talent searches, robotics competitions, hackathons, academic or scholarship competitions or prizes, STEM clubs, research internships, science or math camps, scientific publications or conferences, not otherwise addressed above.

1. Cambridge Centre for International Research $2500 STEM scholarship (top 1%): Selected as top 1% of students attaining this scholarship for excellence in the STEM field.
2. MIT Undergraduate Research Technology Conference Presenter (only high school student). Research on Parkinson's Disease was selected to be presented at the 2025 MIT URTC conference.
3. Conrad Innovation Challenge top 15% team. Project on nanotechnology in breast cancer was selected as a part of the top 15% of teams in the competition.
4. Biomedical engineering research internship at UC Merced. Attained a research internship under Dr. Sachin Goyal at UC Merced through cold emailing. First high school student to ever intern at UC Merced.
5. Publication in IJRAR Journal. Research on skin cancer published in the IJRAR journal (~5% acceptance to the journal).
6. Breast cancer research featured in national newspaper. Research on breast cancer imaging and treatment featured in national news.
7. First LEGO League India Runner-ups. Received the runner up position in a national STEM Competition with over 50,000 applicants.

4. Please list (concisely) the applicant's most important non-STEM awards, activities, and accomplishments:

Give some measure of the extent of participation and accomplishments, and awards or recognition received, in other areas, including for example: performing, visual, or literary arts; athletics; outside hobbies; clubs; journalism or blogging; student government or leadership; education, public service, philanthropy; or entrepreneurship.

1. IB x HundrED Youth Ambassador: Chosen as 1 of 50 Youth Ambassadors out of application pool of 1000+ (5% acceptance rate) to develop global passion projects that advance the achievement of the Sustainable Development Goals (SDGs).
2. Jr. NBA National Team: Selected out of 1000+ candidates to represent the national team in the Jr. NBA U14 National tournament (top 1%)
3. Sports Scholarship: Awarded the school sports scholarship worth $1500. Awarded to 3 students out of over 1000 students (top 0.3%).
4. Duke of Edinburgh Bronze Medal Awardee: Awarded the Bronze Medal in the Duke of Edinburgh programme for completion of 4 areas: volunteering, physical activities, skills, and an expedition.
5. School Academic Scholarship: Awarded the school scholarship worth $2500 for achieving the highest results in the IB MYP E-Assessments.

5. Please list any previous STEM research

CEE neither presumes nor requires previous scientific research projects to attend RSI, but if the applicant has undertaken research, the RSI selection committee will be interested in hearing about your most significant previous experience, whether undertaken in an academic, corporate, non-profit or governmental setting.

This might include: projects for science fairs or other STEM competitions, or paid or volunteer research at a university, business, medical center, or a state or national laboratory, or else a substantial and substantially self-directed experiment or project for a research course or program offered at your secondary school. "Shadowing" type internships would not normally be construed as independent or supervised STEM research, nor would independent self study or supervised reading courses, nor standard laboratory assignments in conventional science courses.

Have you conducted any prior STEM research? If so, more follow-up questions will be asked.

Yes

5.1. Previous Research Topic:

Briefly describe the topic and structure of your most significant or most recent research project. Summarize your contributions to the project, and indicate what specific tasks you undertook.

My most significant research project focuses on developing an adaptive deep brain stimulation (DBS) framework for managing Parkinson's Disease tremors. Parkinson's is a chronic neurodegenerative disorder marked by motor impairment, where tremors fluctuate throughout the day, making fixed-intensity DBS insufficient for consistent symptom relief. In this project, I designed a system that integrates convolutional neural networks (CNNs) for real-time tremor detection from 3-axis accelerometer data with an adaptive DBS model built in MATLAB Simulink. The CNN identifies tremor patterns in the incoming sensor signals, and a PID controller dynamically adjusts the stimulation intensity based on real-time feedback. This combined machine-learning-and-control-systems approach improves the precision and personalization of tremor management. I served as the principal author and primary researcher on the project. I collected and processed the accelerometer data, built and trained the CNN model, developed the adaptive DBS control system in Simulink, conducted all experiments, and drafted the full manuscript.

5.2. How was your prior research structured?

Research is a collaborative process. Please help us learn more about your research experience by checking all that apply.

Identified and contacted a scientist on my own, without support from a relative, my school, or acquaintances

5.3. Which of the following describes your research experience?

Select all that apply. (We are fine with any of the options below—we just want full disclosure.)

I paid a fee to work on my research and/or paper (tuition, mentorship fees, paper review fee, etc.)

5.4. Where and when did you conduct your research?

Describe the research location (university, institution, company, etc.) including the name of the lab, department and/or program, if applicable. Also hours per week and dates worked (e.g., 7 hours/week from June 1–August 15, 2025).

UC Merced. 10 hours/week from June 10–December 10, 2024

5.5. Research mentorship

If you had a mentor as indicated above, please indicate how you first met them, and what role they played in your research (what were their responsibilities? How did they guide your work? How often did you meet? etc)

I had a mentor, Dr. Sachin Goyal, who guided me throughout the entire research project. He taught me how to use MATLAB, which I used to conduct the simulations modelling a closed feedback loop system. I had his assistance in drafting the manuscript as well, as he taught me how to write using LaTex. I met with professor twice a week.

6. Hands-on project portfolio

If you work on hands-on projects that demonstrate technical creativity and aptitude, please link us to an external, well-organized, publicly available portfolio of your projects for us to review (e.g. a website, YouTube video, Google Drive folder, etc). This section is optional, and not expected; we are simply making it available as a space for you to share such projects with us, if you do them.

7. Publications:

CEE neither requires nor expects RSI applicants to have scientific publications, but the selection committee would like to learn more about any articles or papers that have either: been published or accepted for publication in a peer-reviewed journal or conference; been posted as a preprint; or been submitted previously to an official national or international science fair, talent search, or other competition.

Please submit a link to the article or the abstract below.

1. https://www.ijrar.org/papers/IJRAR24D3021.pdf
2. https://drive.google.com/drive/folders/1x5Uk94FfFkybiZmnFAsbM4kRFy_iJijw?usp=sharing

IIIa. Applicant Releases and Affirmations   * indicates a required field

Please read each statement carefully, and indicate understanding, affirmation, or agreement as indicated.
Acceptance of these conditions is necessary for consideration for admission to the 2026 RSI:

1.
Information provided as part of this application may be reviewed by CEE staff, and will be shared with the RSI selection committee. If a student is selected to attend RSI, the completed application may also be shared with RSI academic staff, prospective research mentors or other publicity.

   I understand.

2. All Personal Statements (in Part II) were written by me.

(Some editorial advice from teachers, mentors, supervisors, coaches, counselors, peers, or parents or other family members is expected and acceptable).

   I affirm.

3.
I hereby waive any rights to examine, read, review, reproduce, or re-transmit any recommendations provided in support of this RSI application.

   I agree.

4.

I intend to complete my final academic year of secondary school starting in the spring/summer of 2027, and to enter college or university in the summer or fall of 2027 (but not sooner).

(Please either affirm or explain how and why your academic trajectory differs):

I affirm.

5.

RSI is a voluntary educational enrichment program, which provides room, board, and local transportation to admitted students but does not offer any salaries, stipends, or course credit.

I understand.

6.

RSI is an intensive residential program, where all students are expected to remain in residence at MIT during the entire extent of the program (June 28 to August 8 2026), and to devote their full effort and energies to RSI activities.

I understand.

7.

If an applicant is offered admission to RSI 2026, CEE and/or MIT will require from the applicant and/or the applicant's guardian further proof of insurance (for US students), waivers regarding liability, permission for use of photographs or other publicity, etc.

I understand.

8.

The RSI application is considered copyrighted material by the Center for Excellence in Education. Apart from personal use and online submission via slideroom.com, any electronic or physical reproduction, transmission, or distribution of any part of this application without the explicit consent of CEE is not allowed.

I acknowledge.

9. To the best of my knowledge, all information provided in this application is true and accurate.

I affirm.

10.

Please type your full name in the box below, to indicate that you have read, understood, and agreed to the conditions of application outlined above.

...Thank you for applying to RSI. We appreciate your interest, and look forward to reading your application....

Ansh Pradeep Kumar

11. Date of submission.

(in mm/dd/yyyy format):

12/08/2025

IIIb. Guardian Releases and Affirmations

* indicates a required field

The following section must be completed by a parent or legal guardian of the applicant listed in part I.

1. At the time of application, the age of the applicant is:

1.1.

If my child/dependent is selected for RSI, I will encourage him or her to participate in RSI/CEE activities through undergraduate and graduate years of study.

I agree.

1.2.

I understand that CEE is a nonprofit, and if my child attends RSI, I will consider supporting the program through my time and/or donations of funds.

I agree.

1.3.

I have read and understood all above affirmations/declarations made by my child/dependent, and endorse all of these declarations:

I affirm.

1.4. To the best of my knowledge, all information provided in this application is true and accurate:

I affirm.

1.5.

By typing my full name in the box below, I indicate that I have read, understood and affirmed the statements above.

...Thank you for your interest in the RSI program, and for your support of your child's STEM passions and educational aspirations....

Chinmayi Sahu

1.6. Today's Date

(in mm/dd/yyyy format):

12/02/2025

2. Please indicate the mode of payment of the suggested RSI application fee:

To help defray costs, CEE requires a (US) $75.00 application fee and a $35 (International) fee with each completed application. (This fee may be waived upon request in a timely manner. Please contact maite@cee.org to request a waiver).

Please waive the application fee

2.1.
Please check the box below to acknowledge that a request has been submitted to CEE to waive the suggested application fee.

Please email Maite Ballestero at maite@cee.org to request a waiver of the application fee at least two weeks before the deadline. Once a fee waiver is approved, select this box and submit the completed application.

Acknowledged.

REFERENCES

Shashank Mishra

Dr.

Young Researchers Institute

vishal@yriscience.com

Research Mentor

Request emailed on December 5, 2025

Waived right to review

Prudhvi K

Head of Department: Science

Sreenidhi International School

prudhvik@sis.edu.in

Physics Teacher

Completed on December 9, 2025

Waived right to review

Rajani Miriyala

Sreenidhi International School

rajanimiriyala@sis.edu.in

DP Math Teacher

Request emailed on December 6, 2025

Waived right to review