- Ref: 248633199
- Is there anything about your military service you would like to share more information about? (This may include: how your military service shaped your goals, how your military service influenced your decision to continue your education, etc.) (250 Words)
    - All enlistees at the start of Singapore's military service have a choice on whether to try out to stay a 'man', take a bit of authority as a 'sergeant', or take command as an 'officer'. Having lived in the US for most of my childhood with almost no connection to any other Singaporean students/communities, I had to ask around to find out what each of the paths may entail. Almost everyone I spoke to, including my officers and sergeants at the time made it clear that the training for each would be exponentially more arduous in that order, especially for officers who will outrank almost everyone, be entrusted with complete control of units, and would only be selected from within the top 10% of the nation's soldiers. I was always advised to stay away from becoming an officer for the fear of their torturous training and excessive responsibility after commissioning, being told it was only for those who wanted to make their whole career in the military, not for someone like me was was planning to leave after my service was over.
Although their advice was convincing, my ambitious nature pushed me to still apply to Officer Cadet School, and with my interest indicated, my observation began. Throughout the next nine weeks in my Basic Training, I could feel the instructors testing my boundaries, evaluating me for the position that they themselves advised me not to pursue, but the end of the training, I had placed within that 10% of all Singaporean males and then was further selected for Officer Training.
Officer Cadet School turned out to be unique because in addition to mastering soldiering skills, we were also expected to master problem-solving, thinking under pressure, and mental adaptability. We couldn't merely follow orders like every other soldier because we were the ones in charge of giving the orders!
I found that I was able to overcome the challenges of OCS through my knowledge and skills from seemingly unrelated fields. When needing to give presentations for approval of our war-planning, I was able to channel my inner national-level debater to advocate for my plan and take the instructors' aggressive questioning in stride. When planning resupply routes and hasty supply distributions, my inner programmer could instinctively give messy situation an algorithmic solution. And when the plan went wrong due to any unforseen circumstance, my inner engineer would rapidly iterate around the situation to meet the mission.
Reflecting on the experience of my OCS training, I was thankful that I took away skills from diverse fields. Seeing how unique and seemingly unrelated sources shaped my problem-solving ability encourages my to pursue my education likewise. I am committed to continue usign all my avenues to further build my toolbox of skills that may come in handy during any other unexpected situation. Whether its required classes that I may not have wanted, a club that offers something new, or even taking the lessons I've learned as an officer into my further education, my experince during military service gave me a newfound maturity with which I now approach the value of knowledge across domains.
    - When all Singaporean enlistees begin military service, they choose to try out to remain a 'man', take authority as a 'sergeant', or seek command as an 'officer'. Having lived in the US for most of my childhood, I had little connection to local communities and asked for advice. Almost everyone, including my superiors, made it clear that training for the officer path was exponentially more arduous and reserved only for the top 10% of the nation's soldiers. They strongly advised me to avoid becoming an officer due to the torturous training and excessive responsibility, saying it was not for someone like me planning to leave after my service was over.
Although their advice was convincing, my ambitious nature pushed me to still apply to Officer Cadet School (OCS), and with my interest indicated, my observation began. Throughout the next nine weeks of Basic Training, the instructors tested my boundaries, evaluating me for the very position they advised me against. By the end of the training, I had placed within that top 10% of all Singaporean males and was selected for Officer Training.
OCS was unique because, in addition to mastering soldiering skills, we were expected to master problem-solving, thinking under pressure, and mental adaptability. We couldn't merely follow orders like every other soldier because we were the ones in charge of giving the orders! This training fundamentally shifted my goals; it proved that I thrive on accepting responsibility and leading under pressure. I learned that the ability to synthesize complex data and rapidly adapt to failure—skills sharpened daily in OCS—is the essential foundation I need to succeed in a demanding field of study and contribute to my community

Starting Singapore's military service, every enlistee must choose whether to remain a soldier, try becoming a sergeant, or pursue command as an officer. Having spent most of my childhood in the US with little exposure to Singaporean culture, I sought advice from those around me. Nearly everyone warned me against striving for officership, citing extreme training, responsibility, and standards reserved only for those planning lifelong military careers.

Despite these warnings, I applied to Officer Cadet School to test my limits. During basic training, I became acutely aware that I was being observed as instructors pushed me beyond my comfort zone. By the end of training, I placed within the top 10% nationwide and was admitted into OCS.

Beyond soldiering skills, OCS challenged us to think critically under pressure, solve ambiguous problems, and defend our decisions. Reflecting on the training, I realise that I relied on skills developed long before my service. When presenting operational plans, I drew on debate experience to remain composed under intense questioning. When planning resupply routes, I approached logistical chaos programmatically, breaking problems into clear steps. When plans failed, I adapted like an engineer, iterating quickly to find workable solutions.

This experience reshaped how I view education. I now approach required coursework, unfamiliar disciplines, and academic exploration with purpose, knowing that their value may only emerge under future pressure. Just as my OCS training drew upon seemingly irrelevant skills, my military service taught me to pursue learning widely, trusting that diverse knowledge builds future decision-making.

- Tell us more about why this field of study at MIT appeals to you.**100 words or fewer*

Despite the ugly waste and smelly odors, I can easily be mesmerised by a garbage truck. Watching its bold mechanics and sophisticated software work in unison to perform essential work takes me to imagining what stories its development could tell. How was the size of ribbing along the panels determined? How does the arm's software handle potential creep in the sensors? MIT's double-major in Mechanical Engineering (2-A/6) and Computer Science & Engineering (6-3) mirrors my passion. Integrating hardware engineering and software development through the "learning by doing" culture offers the ideal environment to explore robotics and create machines for society.

- Does your family own or rent the primary home you live in? (20 Words)
    - As I am in National Service, I live in the Army barracks. When not there, I use our owned home.
- If you have additional information about your family that you think is important for us to know, please include it here. *optional; 100 words or fewer*
- What have you been doing since you left high (secondary) school?**400 words or fewer*
    - Graduated high school in June 2024
    - Enlisted into National Service in July 2024
    - Earned BMTC School 4 best company award.
    - Finished my Basic Military Training in the top 10% and getting selected for Officer Cadet School (OCS)
    - During OCS, I trained through constant punishments, consistent sleep deprivation, and nonstop mock-war exercises.
    - Completed 16 jungle exercises
    - Took part in 2 overseas exercises
    - Fired 10 different weapons
    - Earned IPPT Commando Gold Award
    - Earned Basic Trainfire Package and Advanced Trainfire Package Marksmanship award.
    - Earned prestigious rigger badge for mastering parachute and airdrop load rigging
    - Commissioned in June 2025
    - Earned Combat Shoot marksmanship award

- Went to a court martial as a defending officer for to defend serviceman in my battalion
- Involved in Singapore's 2025 humanitarian aid in Gaza
- Masterred underslung operations and completed a joint army, navy, and airforce live task

- In addition to the army journey, I was also living completely alone in the country while my parents were living in the US.
- I had to maintain the cleanliness of the house weekly
- Experienced crisis when a pipe in the home started to leak in the home
- Cooked my own food to stay healthy on the weekends
- Handled all budgeting and bills for the home solely through my pay from NS
-

I graduated from high school in June 2024 and entered Singapore's National Service one month later. What I expected to be a period of hesitant obligation became the most formative years of my life, reshaping how I lead, learn, and live independently.

I began with Basic Military Training, where my company earned the Best Company Award. Finishing in the top 10% nationwide in this cohort, I was selected for Officer Cadet School (OCS). There, what little comforts I had left disappeared instantly. Training meant constant physical punishment, chronic sleep deprivation, and nonstop mock-war exercises designed to break habits before building leaders. Over the course of OCS, I completed 16 jungle exercises, participated in two overseas exercises, and trained with ten different weapons systems. I earned the Physical Fitness Test's highest 'Commando Gold' Award, Basic and Advanced Trainfire marksmanship awards, the Jungle Confidence Course survival training badge and the prestigious Rigger badge for mastering parachute and airdrop load rigging.

In June 2025, I was commissioned as an officer. Leadership quickly extended beyond training scenarios. I regularly served duties being responsible for incident reporting across the whole battalion. I had to quickly learn to manage my new unit as I took charge of their training, morale, and discipline. I once served as a defending officer in a court martial trial, advocating for a serviceman facing a jail sentence. I also contributed to Singapore's 2025 humanitarian aid efforts for Gaza and completed a joint Army–Navy–Air Force underslung live task, gaining firsthand exposure to complex, interdisciplinary systems operating under pressure.

Alongside my military responsibilities, I lived entirely alone in Singapore while my family was in the United States. I maintained the household, cooked my own meals to stay healthy, managed all budgeting and bills on my National Service pay, and handled unexpected crises—like responding to a sudden pipe leak—without a safety net.

All in all, since leaving high school, I have learned to function under sustained stress, to lead when information is incomplete, and to take ownership of both people and systems. Additionally, I have maintained this personal discipline outside of the army too, living alone and successfully meeting the responsibilities of my sudden independence. These experiences have grounded me, sharpened my discipline, and strengthened my ability to pursue the goals that I set my mind to. These skills and mindsets will directly help me take the most from my future education too.

- If there is anything we should know about your school's course offerings, extenuating circumstances regarding your coursework or access to standardized testing, or school's grading system, please use the space below. *optional; 250 words or fewer*
    - My school had some anomalies in the GPA system. For example, classes like my business or engineering electives were weighted lower than other electives at the same level. These discrepancies and differences in weighting are not made known to the students before enrolment, benefiting only those who found the issue before course selection through unofficial means.
    - My school also had certain loopholes within their GPA calculator system, allowing certain pre-informed students to effectively nullify the GPA penalty of taking certain mandatory classes like physical education, arts, and economics.
    - There are multiple accounting and bookkeeping errors throughout the records, like my debate courses being mixed and matched my 10th and 11th grade (instead of reflecting how I had tried-out directly into debate 2 in 10th grade, they have down-graded one semester of each year into a class I did not take), or the Theatre 2 class being re-taken after 9th grade and getting re-labeled as PROD because the school discontinued the Theatre 3 option for 10th grade.
    - Although my school advertises and offers IB classes and their IB Diploma Programme, they do not follow through with the syllabus and still have not released my scores after multiple requests.

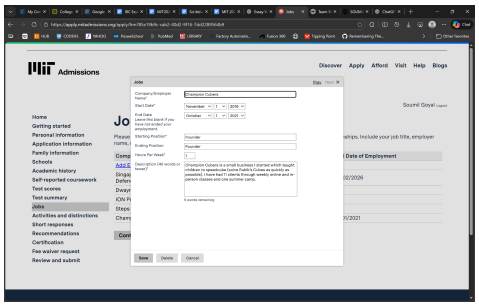
My high school's academic structure includes several features that may be helpful to understand when reviewing my transcript:

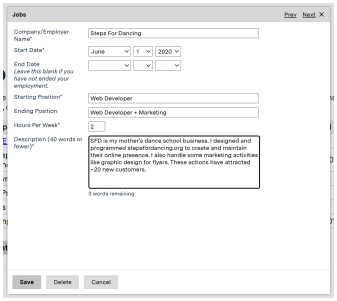
Course weighting varied in ways not always transparent to students prior to enrollment. For example, engineering and business electives were weighted lower than other electives at the same level, despite comparable rigor. These weighting differences were not communicated through official channels before course selection.

There were also record-keeping inconsistencies in my academic records. My debate coursework was inaccurately logged across grades 10 and 11, despite my direct placement into Debate II in grade 10 following tryouts. In addition, when my school discontinued Theatre III, my continued coursework was reassigned under a different course code, creating the appearance of repetition rather than progression.

Additionally, although my school offers IB courses and advertises the IB Diploma Programme, implementation was inconsistent. The IB syllabus was not fully followed, and I am yet to receive official IB results.

As the first in my family to attend school in the United States, I entered an academic system that was unfamiliar and required significant adjustment. Throughout high school, I consistently pursued the most rigorous course options available and adapted to the institutional constraints, such as continuing debate through extracurricular participation rather than for credit, transitioning from engineering to computer science courses, and taking the theater courses on a pass/fail basis to maintain academic challenge while navigating the school's grading structure.

- JOBS
  - 

- 
Jobs
Prev Next
Company/Employer Name*
Steps For Dancing
Start Date*
June 1 2020
End Date
Leave this blank if you have not ended your employment.
Starting Position*
Web Developer
Ending Position
Web Developer + Marketing
Hours Per Week*
2
Description (40 words or fewer)*
SFD is my mother's dance school business. I designed and programmed stepsfordancing.org to create and maintain their online presence. I also handle some marketing activities like graphic design for flyers. These actions have attracted ~20 new customers.
3 words remaining
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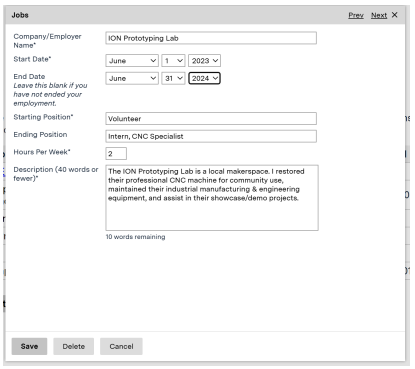
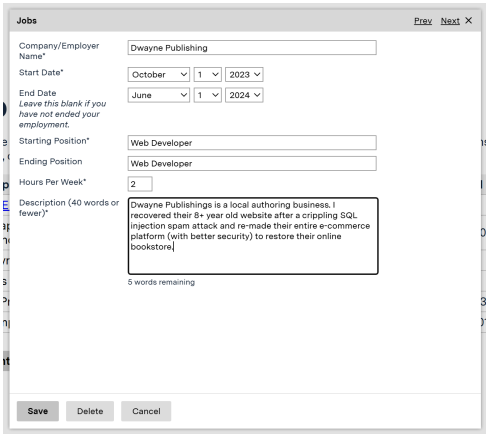
Cancel
- 
Jobs
Prev Next
Company/Employer Name*
ION Prototyping Lab
Start Date*
June 1 2023
End Date
Leave this blank if you have not ended your employment.
June 31 2024
Starting Position*
Volunteer
Ending Position
Intern, CNC Specialist
Hours Per Week*
2
Description (40 words or fewer)*
The ION Prototyping Lab is a local makerspace. I restored their professional CNC machine for community use, maintained their industrial manufacturing & engineering equipment, and assist in their showcase/demo projects.
10 words remaining
Save
Delete
Cancel
- 
Jobs
Prev Next
Company/Employer Name*
Dwayne Publishing
Start Date*
October 1 2023
End Date
Leave this blank if you have not ended your employment.
June 1 2024
Starting Position*
Web Developer
Ending Position
Web Developer
Hours Per Week*
2
Description (40 words or fewer)*
Dwayne Publishings is a local authoring business. I recovered their 8+ year old website after a crippling SQL injection spam attack and re-made their entire e-commerce platform (with better security) to restore their online bookstore.
5 words remaining
Save
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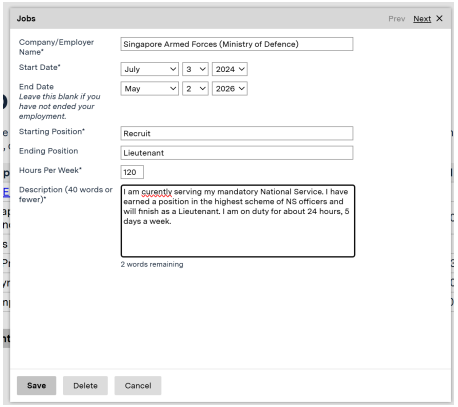
Cancel
- 
Jobs
Prev Next
Company/Employer Name*
Singapore Armed Forces (Ministry of Defence)
Start Date*
July 3 2024
End Date
Leave this blank if you have not ended your employment.
May 2 2026
Starting Position*
Recruit
Ending Position
Lieutenant
Hours Per Week*
120
Description (40 words or fewer)*
I am curently serving my mandatory National Service. I have earned a position in the highest scheme of NS officers and will fnish as a Lieutenant. I am on duty for about 24 hours, 5 days a week.
2 words remaining
Save
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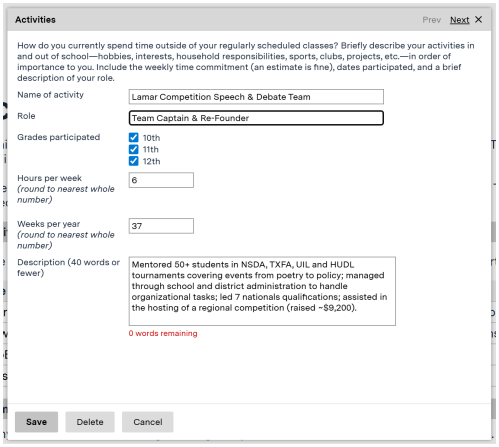
Cancel

- ACTIVITIES


Activities
Prev Next
How do you currently spend time outside of your regularly scheduled classes? Briefly describe your activities in and out of school—hobbies, interests, household responsibilities, sports, clubs, projects, etc.—in order of importance to you. Include the weekly time commitment (an estimate is fine), dates participated, and a brief description of your role.
Name of activity
Lamar Competition Speech & Debate Team
Role
Team Captain & Re-Founder
Grades participated
10th
11th
12th
Hours per week
(round to nearest whole number)
6
Weeks per year
(round to nearest whole number)
37
Description (40 words or fewer)
Mentored 50+ students in NSDA, TXFA, UIL and HUDL tournaments covering events from poetry to policy; managed through school and district administration to handle organizational tasks; led 7 nationals qualifications; assisted in the hosting of a regional competition (raised ~$9,200).
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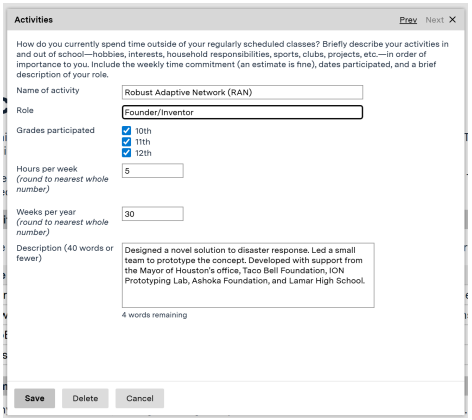
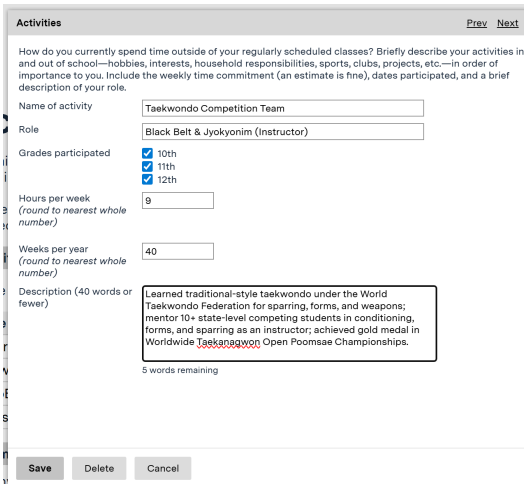
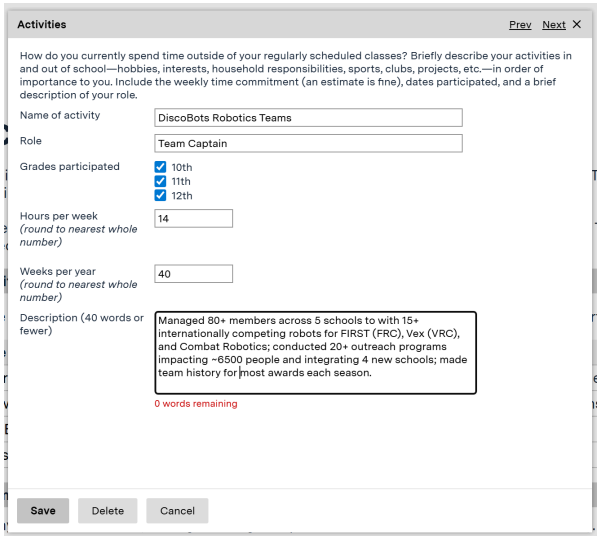

Activities
Prev Next
How do you currently spend time outside of your regularly scheduled classes? Briefly describe your activities in and out of school—hobbies, interests, household responsibilities, sports, clubs, projects, etc.—in order of importance to you. Include the weekly time commitment (an estimate is fine), dates participated, and a brief description of your role.
Name of activity
Robust Adaptive Network (RAN)
Role
Founder/Inventor
Grades participated
10th
11th
12th
Hours per week
(round to nearest whole number)
5
Weeks per year
(round to nearest whole number)
30
Description (40 words or fewer)
Designed a novel solution to disaster response. Led a small team to prototype the concept. Developed with support from the Mayor of Houston's office, Taco Bell Foundation, ION Prototyping Lab, Ashoka Foundation, and Lamar High School.
4 words remaining
Save
Delete
Cancel


Activities
Prev Next
How do you currently spend time outside of your regularly scheduled classes? Briefly describe your activities in and out of school—hobbies, interests, household responsibilities, sports, clubs, projects, etc.—in order of importance to you. Include the weekly time commitment (an estimate is fine), dates participated, and a brief description of your role.
Name of activity
Taekwondo Competition Team
Role
Black Belt & Jyokyonim (Instructor)
Grades participated
10th
11th
12th
Hours per week
(round to nearest whole number)
9
Weeks per year
(round to nearest whole number)
40
Description (40 words or fewer)
Learned traditional-style taekwondo under the World Taekwondo Federation for sparring, forms, and weapons; mentor 10+ state-level competing students in conditioning, forms, and sparring as an instructor; achieved gold medal in Worldwide Taekanagwon Open Poomsae Championships.
5 words remaining
Save
Delete
Cancel

- 

- SUMMER ACTIVITIES OLD
  - **Summer activities**

    List any summer activities (reading, relaxing, camp, travel, summer school, volunteer work, etc.). List your most recent summer activity first.

    You may list any summer jobs and internships in the previous Jobs section.

Summer Activity	Approximate Dates of Participation	Approximate Hours per Week
Travelled India to reunite with my cousins and relatives.	Early July - Late August	All
Learning Convolutional Neural Networks (AI) in image recognition	Mid June - September	4
Completed 2+ hours of rigorous exercise per day.	Early June - Late August	18
Attended the Rise Elite Tech Camp on a scholarship.	Mid June (one week)	9
Built new websites to hone my web-development skills.	Late June - Late July	7
Summer Robotics Activities (FRC, outreach, Combat Robotics)	Early June - Early July	19

  - **College access programs**
- SUMMER ACTIVITIES NEW
  - Commissioned as army officer in the SAF
  - Passed the army vechile - Class 3 Manual driving course
  - Joined the SAF’s Sea Terminal Company
  - BSTOC, BUC, ULIC,
  - Make it temporary
  - Best NSF for Bn fitness

    Summer activities

    List any summer activities (reading, relaxing, camp, travel, summer school, volunteer work, etc.). List your most recent summer activity first.

    You may list any summer jobs and internships in the previous Jobs section.

Summer Activity	Approximate Dates of Participation	Approximate Hours per Week
Won 2nd place in the "Make It Temporary" Autodesk design contest	May 2025	4
Passed SAF's Basic Sea Terminal Operator Course	July 28, 2025 - August 8, 2025	40
Passed SAF's Basic Underslung Course	August 18, 2025 - August 29, 2025	40
Passed SAF's Underslung Load Inspectors' Course	September 2, 2025 - September 9, 2025	40
Passed the Army's Class 3 Vechicle - Manual driving course	June 23, 2025 - July 23, 2025	40
Won battalion's Best National Serviceman (Fulltime) in fitness	June 2025 - August 2025	7

  - **College access programs**

- AWARDS

Scholastic distinctions

You may list up to **five scholastic distinctions** you have won since entering high (secondary) school. Please include the year you received the achievement and indicate the level of distinction.

Name of Award	Organization	Level	Year Awarded
Vex Worlds Inspiration All Star Award & Guest speaker at 2022 Vex Robotics World Championships	Vex Robotics Competition	International	2021
2nd-ranked extemporaneous speaker in NSDA's South Texas District	National Speech and Debate Association	State	2023
Ambition Accelerator Best Voted Idea. Noted as "Inspirational" by Taco Bell's former CEO, Mark King.	Taco Bell Foundation	National	2022
National Quarterfinalist	Vex Robotics Competition	National	2024
Houston Resilience Design Challenge grand prize winner.	National Wildlife Federation (NWF)	Regional	2022

Would you like to report results from the MAA's American Mathematics Competitions (such as the AMC or AIME)?
If you haven't taken these exams or don't know what they are, don't worry about it; most applicants haven't.
☐ Yes

Do you have any learner/tutoring certifications through Schoolhouse.world?
If you haven't taken these certifications or don't know what they are, don't worry about it; most applicants haven't.
☑ Yes

Provide the link to your Schoolhouse.world certification transcript or portfolio:
https://schoolhouse.world/transcript/029c87c6-b0a8-428a-

Non-scholastic distinctions

You may list up to **five non-scholastic distinctions** you have won since entering high (secondary) school. Please include the year you received the achievement and indicate the level of distinction.

Name of Award	Organization	Level	Year Awarded
Worldwide Taekangwon Open Poomsae Championships Gold Medalist	World Taekwondo	International	2021
Selected to be an industry-talk host at the Autodesk University Engineering Conference	Autodesk	International	2023
National Finalist for Veteran's Day design contest	Future Engineers & [US] Army Educational Outreach Program	National	2022
Individual Physical Proficiency Test Commando Gold award	Singapore Armed Forces	National	2024
National Merit Scholarship	National Merit Scholarship		

- While some reach their goals following well-trodden paths, others blaze their own trails achieving the unexpected. In what ways have you done something different than what was expected in your educational journey?* *225 Words or Fewer*
    - My educational journey was unexpected because I chose to broaden my horizons and explore various disciplines rather than doing the expected thing of specialising into one route. Although my main passion and career goals lie in robotics, I made sure to diversify my expertise through many more domains like debate, learning mandarin chinese, athletics, arts, maths, and more. This was despite the reigning advice to specialise in a certain field and earn more prestigious awards there instead of spreading myself too thin and only finding meager recognition in each. Regardless of that, I still earned more than 39 awards in my robotics up till the international level, regularly competed

at the national level for debate, even ranking 2nd in the South texas district, Competed up till the international level in theatre, speak mandarin with a working proficiency, won gold in an international taekwondo competition, etc. In addition to these, I started many of my own initiatives like Robust Adaptive Network (RAN): a novel invention for disaster response, Screen Salvagers, Pedal Power, and more.

While many students are encouraged to narrow their focus early—choosing a single lane to optimize for credentials—I deliberately broadened my education. I believed that meaningful innovation emerges not from isolation within one discipline, but from the intersection of many.

Robotics has always been my core passion and long-term goal. Yet rather than pursuing it in isolation, I explored debate, athletics, the arts, Mandarin, mathematics, and service through scouting. This choice carried risk: spreading myself “too thin” could have meant fewer accolades or less conventional recognition. Over time, however, I discovered that depth and breadth were not opposites. Instead, each pursuit sharpened the others.

That balance became tangible through achievement. In robotics, I earned over 39 awards and competed internationally. Beyond engineering, I competed nationally in debate, ranking second in the South Texas district; advanced to international-level theatre competitions; developed working proficiency in Mandarin; placed well in math competitions; and won gold at an international taekwondo event. These experiences were not disconnected successes, but complementary training grounds.

Together, they reshaped how I approach problem-solving. I stopped viewing challenges as confined to a single domain and instead began tackling them from multiple angles. This mindset led me to launch several independent initiatives: Robust Adaptive Network (RAN), a disaster-response system recognized by national competitions and the Mayor of Houston; Screen Salvagers, a local effort addressing plastic waste and supply shortages through reuse; and Pedal Power, which leverages human connection to combat climate change.

My interdisciplinary background enabled these projects to move from idea to impact. I could engineer and code solutions, articulate their value through persuasive presentations, design visual materials to communicate them clearly, and adapt when challenges shifted from technical to social or logistical. This flexibility allowed each initiative to survive beyond conception and respond to real-world constraints.

My educational journey defied expectations by prioritizing integration over specialization. By embracing breadth alongside rigor, I found that exploration strengthened—not diluted—my goals and prepared me to design solutions grounded in the complexity of the real world.

Robotics has always been my core passion, yet instead of pursuing it in isolation, I explored debate, athletics, arts, Mandarin, mathematics, boy scouts, and more. While many students are encouraged to narrow their focus early, I deliberately broadened my education, believing innovation emerges at the intersection of many disciplines rather than within just one.

I earned 39+ awards and competed internationally in robotics, became a national-level debater ranking second in the South Texas district, advanced to international theatre competitions, developed proficiency in Mandarin, placed highly in math competitions, and won gold in taekwondo. These experiences were not disconnected successes, but complementary training grounds.

Together, they reshaped how I approached problem-solving. I began viewing goals as multidimensional, leading me to launch several initiatives: Robust Adaptive Network (RAN), Screen Salvagers, Pedal Power, and a handful of other clubs and projects along the way.

My interdisciplinary background was essential to move these projects from idea to impact. I could engineer and code solutions, articulate their value through persuasive presentations, design visual materials to advertise them, and adapt when challenges shifted from technical to social or logistical. This flexibility allowed each initiative to survive beyond conception and respond to real-world constraints.

My educational journey defied expectations by prioritizing integration over specialization. By embracing breadth alongside rigor, I found that exploration strengthened—not diluted—my goals and prepared me to design solutions grounded in the complexity of the real world.

Here is a version reduced by ~40 words while preserving meaning and detail:

Robotics has always been my core passion and career goal. Yet instead of pursuing it in isolation, I explored debate, athletics, arts, Mandarin, mathematics, boy scouts, and more. While many students narrow their focus early, I deliberately broadened mine, believing innovation emerges at the intersection of disciplines. Spreading myself “too thin” could have

meant lesser learning and fewer accolades, but I soon learned that depth and breadth did not have to be opposites.

I earned 39+ awards and competed internationally in robotics, became a national-level debater ranking second in the South Texas district, advanced to international theatre competitions, developed proficiency in Mandarin, placed highly in math competitions, and won gold in taekwondo. These experiences were not disconnected successes, but complementary training grounds.

Together, they reshaped how I approached problem-solving. I began viewing goals as multidimensional, which led me to launch initiatives such as Robust Adaptive Network (RAN), Screen Salvagers, Pedal Power, and several other clubs and projects.

My interdisciplinary background was essential in moving these ideas from concept to impact. I could engineer and code solutions, articulate their value through persuasive presentations, design visual materials, and adapt when challenges shifted from technical to social or logistical. This flexibility allowed each initiative to respond to real-world constraints.

My educational journey defied expectations by prioritizing integration over specialization. Embracing breadth alongside rigor strengthened—not diluted—my goals and prepared me to design solutions grounded in real-world complexity.

While many students are encouraged to narrow their focus early, choosing a single lane to optimize for credentials, I deliberately broadened my education. I believed that meaningful innovation emerges not from isolation within one discipline, but from the intersection of many.

Rather than just pursuing robotics in isolation, I explored debate, athletics, the arts, Mandarin, mathematics, boy scouts, and more. This choice carried risk: spreading myself “too thin” could have meant fewer accolades and less learning. However, over time, I discovered that depth and breadth were not opposites.

As I put my full efforts into many seemingly unrelated disciplines, they reshaped how I approached problem-solving. I began viewing goals as multidimensional, enabling me to launch several initiatives such as RAN, Screen Salvagers, Pedal Power, and several other clubs and projects.

My interdisciplinary background was vital for these projects to move from idea to impact. I could engineer and code solutions, articulate their value through persuasive presentations, design visual materials to communicate them clearly, and adapt when challenges shifted from technical to social or logistical. This flexibility allowed each initiative to survive beyond conception and respond to real-world constraints.

My educational journey flouted expectations by prioritizing integration over specialization. By embracing breadth alongside rigor, I found that exploration strengthened my goals and prepared me to design solutions grounded in the complexity of the real world.

- MIT brings people with diverse backgrounds together to collaborate, from tackling the world's biggest challenges to lending a helping hand. Describe one way you have collaborated with others to learn from them, with them, or contribute to your community together.*225 words or fewer

When my teacher asked for help disposing of COVID-19 tabletop dividers cluttering her storage, their straight, sturdy plastic sheets inspired me to repurpose them as stock material for our robotics team.

Realizing my teacher was unlikely to be the only one with unused dividers, I shared the idea with Guillermo, a robotics teammate who I knew had an eye for observation. His recollection of similar dividers in another teacher's room sparked an impromptu idea to expand the exploration.

When we approached Guillermo’s teacher, we not only secured more dividers but also gained her support. She sent a department-wide request, triggering a domino effect of teachers eager to clear space as I coordinated additional team members to collect the growing supply.

Through these collaborative efforts, we eventually evolved into the 'Screen Salvagers' project, gathering a larger team to further our collection. In just two years we saved 400+ pounds of polymethyl-methacrylate (PMMA) and polycarbonate that have become a bank of sheet plastic for limitless future engineering projects.

Reflecting on this journey, it's clear that our success stemmed from a network of collaborations: my initial teacher's openness, Guillermo's proactive approach, and the ripple effect sparked by collaborations with teachers and administrators who contributed to our cause. Bringing all these people together culminated to demonstrate that small actions, when shared, can scale into tangible, lasting impact.

One May of my junior year, my teacher requested help disposing of **tabletop plastic dividers that had been sitting in storage since the lifting of COVID-19 restrictions.** Despite being slated for disposal, the straight, sturdy **sheet plastic** sparked an idea to repurpose it as stock material for our robotics team, easing our resource shortages.

My first collaboration was with Guillermo, a dedicated sophomore on our team. As we transported the initial batch, his recollection of similar dividers in another teacher's storage led to an impromptu idea to expand our exploration. Approaching his teacher, we not only secured additional **sheet plastic** but also piqued her interest in our endeavor. Her subsequent department-wide call for discarded dividers created a domino effect, with an administrator even directing us toward other sources of **sheet plastic waste**, like old school signboards. This

collaborative ripple effect quickly led to the formation of the 'Screen Salvagers' project.

Through these collaborations, we ultimately saved over 400 pounds of polymethyl-methacrylate and polycarbonate. This material has since found new life in our school's engineering projects and competitions. **Though my initial exploration is complete, the project is still carried on by younger robotics team students who continue to find materials that can be reused for their pure engineering competitions to this day.** This enduring effort has taught me that community-level contribution and problem-solving are fundamentally built on connecting diverse people and expertise, creating a lasting legacy beyond the initial spark.

- How did you manage a situation or challenge that you didn't expect? What did you learn from it?*225 words or fewer
    - "If you don't kill it, you won't get points."
      The instructor's words put me in a jarring dilemma. Our team, theoretically stranded deep in enemy jungle, was hungry and fatigued. We had just finished a grueling survival assessment of our shelters, water procurement, animal traps, and I, despite my exhaustion, had secured the highest score, putting me first in line for the prestigious 'best trainee' award.
      Then came the quail.
      We were each handed a bird to kill for food. I understood the skill, but as a vegetarian whose culture teaches the sanctity of life, I realized I was not hungry enough to take its life, especially since the exercise was nearly over. The instructor's words, a direct challenge to my ambition, hung in the air. The award and the recognition I had worked so hard for lay on one side; my core ethics lay on the other.
      Despite their mounting pressure, I set the bird free. I explained that in a real, life-or-death scenario, I would have proceeded, but in training, I chose not to needlessly take a life. I was disqualified from the award, but managing that unexpected ethical dilemma taught me the real weight of my values. Months later, as teammates still reflected on the quail squirming in their hands, I knew the respect and moral clarity I gained outweighed any trophy.
- No application can meet the needs of every individual. If there is significant information that you were not able to include elsewhere in the application, you may include it here. (Many students will leave this section blank—and that's okay.)Please note, we may not be able to access all links you share. If you have supplemental materials you would like to submit, please refer to our optional creative portfolios.optional; 300 words or fewer
    - In my "educational journey" essay, I mentioned learning mandarin.

- ***- In my 'educational journey' essay, I touched on a meaningful part of my journey: learning Mandarin. After I was born in India, my family became citizens of Singapore. Upon moving to Singapore, I made a choice to learn Mandarin in order to better engage with the predominantly Chinese community. This quest was particularly meaningful to me because I lack any Chinese background or familial support, making it even harder to learn the 'hardest language in the world'.***
- ***After Although there is less incentive to maintain my mandarin in the US, I continue to practise and build my Mandarin skills. Today, I can win speech contests, compose essays, and hold fluent conversations in Mandarin. Additionally, I deeply value my heritage's traditional backgrounds and perspectives, fostering native proficiency in Hindi. Simultaneously, my education in English nurtured a natural fluency in this language. In this way, I'm proud of my trilingual ability***
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- ***- In my activities section, I mentioned 'Robust Adaptive Network (RAN)' and 'Pedal Power'. These are my two most prized passion projects.***
- ***Inspired by my family and friends' experiences with the Mumbai Floods, Turkey Earthquakes, Hurricane Harvey, and Winter Storm Uri, RAN is a system of drones and rovers that delivers supplies, provides satellite communications, and relays live data during a natural disaster. This project won $1500 in the National Ambition Accelerator competition (as noted in the distinctions). I am developing this patent-pending upgrade to disaster response technologies with the support of the Mayor of Houston's office, the Taco Bell Foundation, ION, and more.***
- ***Pedal Power is another project I founded. It's a stationary bicycle that charges electronic devices through the rider's pedalling. This is project won $750 from the National Wildlife Federation for its implementation (as noted in the distinctions). Pedal Power has now been installed in my school's common area, it encourages exercise, demonstrates off-grid power solutions, and raises awareness of electricity wastage.***
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- ***- I once read in a blog that "MIT is where science and society meet". I wanted to highlight the 'society' part a bit more with my community service hours log: https://soumilgoyal.com/index.html#community-service-log .***
- ***Through this record, you can see that a majority of my community service hours log are dedicated to actions like teaching younger peers or volunteering at educational competitions. One reason for this is because of the high value I place on education. I am grateful for inspiring education I have received, and I admire the power to inspire others similarly. Additionally, especially relating to my 90+ hours of community service towards multiple competition, as a competitive student, have been thankful for all the competitions I have been able to participate in. Amongst these events, none of them ran without volunteers, meaning that my accolades, skills, and experiences were built upon the gracious selflessness of other volunteers. From this, I have a calling to continue their impacts by volunteering in competitions, ensuring that anl y***

other students will have the opportunity of smooth, fair, and constructive competitions.

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- ***Thank you for reviewing my application!***
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