1. How did you discover your intellectual and academic interests, and how will you explore them at the University of Pennsylvania? Please respond considering the specific undergraduate school you have selected. (300-450 words) For students applying to the coordinated dual-degree and specialized programs, please answer these questions in regard to your single-degree school choice; your interest in the coordinated dual-degree or specialized program may be addressed through the program-specific essay.\*

As an eight-year-old child, I used to look forward to the time when my father used to teach my sister mathematics. I used to sit with the two of them and try to understand whatever the topic was, on that day, from rational numbers to profit and loss, It used to bring me immense pleasure answering the questions my father used to ask my sister because it meant that I understood portions that were ahead of my age and it used to boost my confidence.

From the time that I remember, I have always answered the question “What is your favourite subject?” with “Mathematics”. It is the only subject that I can spend hours together answering questions, past papers and more. I slowly realised that it was my passion and I could do it all my life.

I discovered it further when, in my 10th, 11th and 12th grade, I was given the opportunity to teach the younger students, of my school, a subject of my choice. I naturally chose mathematics two out of the three times and was awarded best teacher for that subject. This showed me that my concepts were clear enough for me to conduct a productive and interactive class. Also, when I participated in the International Mathematics Olympiad, I topped the school rankings for my grade.

I enjoy solving logical reasoning questions, riddles and sudokus. I am easily interested by word puzzles and crosswords as well.

I assume that all this is what got me interested in physics and computer science as well. I was mostly fascinated by nuclear and quantum physics and I particularly enjoy practical computer science especially programming.

I hope to develop on my mathematical skills and explore more on how to connect it to other subjects that I am interested in, like physics and computer science. I wish to eventually, discover a way in which to maintain the critical balance between the human world and nature and I believe this cannot be done without a mathematical background to calculate the amount that can be considered sustainable.

1. At Penn, learning and growth happen outside of the classrooms, too. How will you explore the community at Penn? Consider how this community will help shape your perspective and identity, and how your identity and perspective will help shape this community. (150-200 words)\*
2. AI Prompt: Why are you interested in the Computer & Cognitive Science: Artificial Intelligence program at the University of Pennsylvania? (400-650 words)\*

My interest in computer science led me to take up a course on Android application programming and Robotics. In the robotics course, I built my own robot which can detect and avoid obstacles or can be voice controlled. During the course, I realised my clear interest in the same and hoped that I could continue in the same field.

I believe that the humans have ruined the Earth to an extent that it is almost irreparable but as every other human, I am also relying on the word “almost”, hoping that a change is brought about before the damage becomes permanent. I want to be a part of bringing the Earth back to its original beauty. Though I realise that it would be almost impossible for Earth to return to its initial strength, like before humans, I want to try and bring it back as much as I can. I want to do this by creating a program or a robot that will try to reverse the small but impactful mistakes that humans make on a day-to-day basis. This can be from collecting the waste in the ocean beds and accumulating them on land to use as building material instead of more concrete and cement to making sure that germination, growth, reproduction, pollination and all other plant processes take place undisturbed. A machine created by humans, to correct the mistakes made by humans.