

Aster Volta
1474 Bushwick Ave.
Brooklyn, NY 11207
May 15, 2019

Mr. Michael Coppola
City College of New York
160 Convent Ave.
New York City, NY 10031

Dear Mr. Michael Coppola:

My intention is to tell you about my relationship to science, and why I decided to pursue a graduate degree in geology. There are three main points I want to write about. My cultural and educational background; some of the financial, immigration, family, and personal challenges that I had to overcome; how science, curiosity and discovery have shaped my life. Since I was a young child, I was curious about how the world worked and would not be satisfied until I had answers to my many questions. My parents only understood basic scientific concepts, so they encouraged me to read and learn on my own. Since then, I have been teaching myself anything that I found interesting. Unfortunately, my parents separated when I was four. I did not fit in school or with my conservative family— who I visited once a year for the religious celebrations.

Since my father died when I was thirteen, and my mom was struggling with mental illness, I had to become self-sufficient. I started working after school to make ends meet. At seventeen I lived on my own, and my main goals became to get a better education in the US and get away from the oppressing Mexican society where I was immersed. For many years I

worked as a science and math tutor for rich high school students and trying to save money to come to the US. I am from Mexico City, which is a conservative country with strict social norms. Mexico is still struggling with issues like racism, classism, corruption, lack of healthcare and water, homophobia, rape and feminicide, etc. These problems and the fact that scientific research is generally underfunded motivated me to leave the country when I was nineteen. Twelve years later, now I am an international student in my last year of college. Some months, I have a hard time getting by because working off-campus is illegal, but I am excited about finally finishing my degree because it has been a long arduous journey. I have attended many universities in three different countries so moving and adapting to all these environments has been challenging, and changed my life in significant ways.

One of my priorities when starting college was to do research at a lab because it enables students to see how real researchers work first hand. Thanks to hard work, and a bit of luck, I was able to find a mentor in the earth and atmospheric science department. She invited me to work with her research team at the geochemistry lab. I have been perseverant by attending meetings, working as an intern in two labs, and being proactive about learning jargon and operating new instruments. Also, I have finished the senior project course where I conducted my own research on igneous rocks from the Cortland Complex. Last summer, I worked as a research mentor for high school students at Hudson River Park. Finally, my name has been added to some publications and posters. I am grateful because my mentor has been supportive and understanding which has made finishing my undergraduate degree a real possibility. I want to have a job that gives me autonomy to pursue my interests. Applying to

Aster Volta
May 15, 2019
Page 3

a master's program is the next step in becoming a professor and researcher, which are my main career goals.

If I continue working with my research group during my masters, I want study microbe and mineral interactions to better understand carbon sequestration in soils. Soil is the second largest carbon reservoir in the planet so this work would improve climate models, and further the understanding of climate change. We have been working on this project for four years so being able to complete it is an important stepping stone to be accepted into a high tier PhD program. When life becomes tough and I want to give up, I read Carl Sagan or go to the geochemistry lab to do research because science humbles and motivates me. I hope my future students can see the beauty of this universe through the understanding some fundamental scientific principles that oil the fine-tuned machinery governing complex physical processes that occur around us every day.

Sincerely,

Aster Volta