Alexander R. Zambrano Tapia October 5, 2024

Testimonial

Dear Dr. Dainotti,

Hi! Hope all is well! This is Alexander Rey Zambrano Tapia. I am currently an undergraduate student at Johns Hopkins University in my sophomore year, majoring in behavioral biology while also starting research at the Bat Lab here at Johns Hopkins. In this letter, I want to thank Dr. Dainotti for all the help and guidance she has given me as a mentor during my time in the Remote Mentoring of SULI (Summer Undergraduate Research Internship).

I first got in contact with Dr. Dainotti in the summer of 2020 thanks to Dr. Arratia, who recommended me for her program. I read more into the Remote Mentoring of SULI program and loved what I was reading. It described how I could get the chance to work with Dr. Dainotti and help her develop her newest research project, where she investigated in more detail Gamma-ray Bursts that happened spontaneously across space. That's when I began to read more about Dr. Dainotti, who said she was a world-renowned scientific researcher who specializes in data collection on astronomical occurrences, such as Gamma-Ray Bursts. Excited by the proposition, I gladly said yes and was excited to start working under her tutelage.

The first meeting was introductions with every new intern alongside more experienced researchers who had already begun helping Dr. Dainotti for some time. In the meeting, is where I also got to meet Dr. Dainotti for the first time. She started off the meeting with a presentation explaining the background of her research so that way the students could have a chance of learning the material and understanding it before work was done. This is when I first started to learn about GRBs and how they work, how they are recorded, and what questions they continue to create. At first, I was admittedly a bit lost, but Dr. Dainotti was never frustrated by it and gave me and the rest of the students enough time to fully digest the material. After she was done presenting, she then explained what we would be doing during the summer, which is helping her in data organization with GRB data collected from a remote telescope. This also meant we had to learn/ use our previous knowledge of coding before we started the work. Thank you again, Dr. Dainotti, for having patience with us in learning this new material and for providing us with the tools to learn more about these concepts. She even answered all the questions I had asked her via email and clarified them in person. Every Saturday, we meet again to discuss our progress on the work Dr. Dainotti had assigned us and what work still had to be done.

After two weeks, we were already properly helping with the assignments Dr. Dainotti were giving to us by working them on Wolfram Mathematica. It would take another two

weeks before I got fully comfortable with the program, which I am amazed at since going into research, I did not think we would have to do that much coding. I see now how misguided that notion was as even now, at Johns Hopkins University, we still have to use coding for various tasks as it facilitates work and data collection and presents all the information more clearly. I was able to easily adapt to it, specifically thanks to being under her tutelage.

We kept working with her for the summers of 2021 and 2022. We managed to do a lot during that time. We met with more researchers who were working alongside Dr. Dainotti and saw them interact when discussing how to work on the scientific paper. We also got the chance to brief more people who were interested in joining the research. We helped them get integrated into the scientific research workload to better facilitate the process. In the end, the papers got to be published, and Dr. Dainotti even gave me and the other research mentees the chance to be in acknowledgments for one paper titled “Optical luminosity of Gamma-Ray Burst, the most explosive events in the Universe” in 2021. It was only one year later, in 2022, that we got the chance to even be co-authors of the newly published scientific research paper titled “The Optical Two and Three-Dimensional Fundamental Plane Correlations for More than 180Gamma-Ray Burst Afterglows with Swift/UVOT, RATIR, and the SUBARU Telescope”, which used elements of the previous paper and continued them.

Overall, I am extremely thankful to Dr. Dainotii for all the help she has given me. She has given me so much, and I still use the skills she has taught me in my time at Johns Hopkins University. I will forever be thankful to her and wish her success in all her future endeavors.