

Adriana Drones

Naval Horizons Essay

Just as the world is thriving with new scientific knowledge and technologies, naval stem is also evolving in its uses and innovations. The work and research naval scientists and engineers have done (and are currently doing) has made various seafaring vehicles and machines more applicable to other fields. More personally, I have noticed (and was fascinated) their work has allowed undersea vehicles to be purposed for various, wide-ranged services, such as naval missions, environmental research, and oceanic documentation and photography. Just in the last few years, the U.S. Navy has increased and “committed to” the usage of unmanned underwater vehicles, or UUVs., in their efforts to strengthen their naval power. These UUVs, classified by size, have been used for naval tasks such as battleship awareness, data collection, software evaluation, and long-range operations. In the same sense, autonomous underwater vehicles (AUVs) have been designed for monitoring and preventing oil spillages and the biofouling of seafaring cables and equipment, helping in the cause of preserving our marine environments. As someone who wants to pursue engineering and is currently exploring the various fields, it was insightful to see just how helpful and extensive naval stem can be in its applications.

In the Department of Navy scientists and engineers, both Dr. Bob Brizzolara and Lily Stewart’s stories stood out to me. Though their experiences, backgrounds, and projects are different, they have both worked with naval vehicles that were designed to assure the safety of others while performing important and even dangerous tasks. However, I especially connected with Stewart’s story. I was inspired by how she was able to gain so much experience and even be involved in these amazing projects that could help save people’s lives. I have always considered going into mechanical engineering as my focused field of study. With mechanical engineering as her major, she was able to branch off into a career focused in naval stem. From her sharing her experiences, I took away that there are diverse sets of paths I can take with mechanical engineering; even if I am not sure what exactly I want to get into, there are various, different routes I can take. Being able to see how she has done all of this great work and has had these opportunities, I was able to reflect on the various ways I might want to connect mechanical engineering to naval stem, as well as other projects and research I want to pursue in the future.

Nowadays I often hear the same question: what will you do to impact the future? After exploring the various missions, projects, experiments, goals, etc. that have been pursued and completed, I have been working on developing my ideas, thinking about what can we do next, what can we do further. What other fields can connect to naval stem? Could we combine biological and naval sciences by developing biomimicry-designed underwater vehicles? Could we use underwater vehicles to sense and monitor natural events that occur below the surface? These questions and ideas, and many more, are ones that I am so interested in exploring, so interested in answering. From rescue submarines to autonomous mission ships, naval stem has shown me how we can reach over the limit with our innovations while exploring the sea below. As I see the amazing research and technology that has been achieved in naval stem and beyond, I want to generate more and add on these great innovations that are currently changing the world and will continue to impact the future.