

# Nicole Lalangan

## Preserving and Advancing America

The Navy and Marine Corps include a vast amount of STEM departments. Each department is crucial in bettering the United States of America. As important as each individual department is, the genuine factor in advancing America is the whole STEM field. The different departments, diverse people, and future technologies of the Navy and Marine Corps are all instrumental in maintaining the liberty that all Americans possess.

One of the departments in the Navy and Marine Corps is cybersecurity. Cybersecurity consists of concealing and protecting the digital footprint that America leaves. However, protecting one's digital footprint is a difficult task because cyberspace is huge and virtually accessible to anyone. That is why this topic is inspiring. Cybersecurity deals with all aspects of life. Whether that be automobiles, personal appliances, computers, communication, or mobile devices. These are all items used everyday by the general public. Finding a way to safeguard what the American people are doing on the internet daily is an immense and challenging task to attempt. Nonetheless, working on this challenge seems exciting and necessary as the world becomes more digital.

Cybersecurity is not only important for the general public, but for the Navy and Marine Corps as well. Both of these forces need a secure way to communicate with its members, protection of their data, and to defend their weapon systems. It is imperative that their communication lines and data remain invisible and unbreachable from suspecting people. This concealed approach is vital in protecting the welfare of American citizens.

One data scientist working for the Navy, Reece Koe, is also instrumental in holding America's values. Koe works on preventative measures concerning the maintenance of Navy machinery. His task is to develop systems from the data in machines, in order to estimate when they will need repairs. This is useful as opposed to waiting for the equipment to unanticipatedly break down. His work is inspiring because it is efficient and enables the Navy to save time. This saved time can give the Navy an advantage in possible conflicts.

How Koe arrived at his current work is also inspiring. He has participated in the Science and Engineering Apprenticeship Program and the Naval Research Enterprise Intern Program. He has been involved in these programs every summer after graduating highschool. These opportunities gave him a taste of his current job. Koe even helped develop algorithms during his internships and got to test them out. At a young age, he was able to contribute to the Navy, which is fascinating. This is inspiring because I also want to participate in these programs. I want to contribute to the Navy, as well and hopefully find my interests for my future career at these programs. My career goals consist of working for the government and doing something new and exciting at my job everyday.

The new technology being developed for the Navy is astounding. It seems that any idea imaginable is possible of being executed by the Navy. In 15-20 years, I believe that the Navy will have chips in people's bodies that personally tell them their health and energy. This concept is similar to gauges in video games for a player's health and energy. This type of technology will be useful for the Navy and Marine Corps to determine if they are able to keep on fighting, when they truly need to sleep, or other limits. This is able to change the public's daily lives by seeing when it is required to visit the doctor. This type of technology can also avoid unnecessary doctor visits and provide immediate diagnoses.

The whole Navy and Marine Corps protect and advance America. America today would not be possible without all its STEM departments, people who dedicate their time to improve the United States, and the state of the art technology that is being developed here. Here we have the pleasure of liberty that we often take for granted. Granted, without the Navy and Marine Corps, we would not be able to savor our freedom.