* **What** -- what was done during the internship

During this internship I developed both a summarizer and retrieval augmented generation program using natural language processing. I used pretrained models and configured them with many different strategies to improve the speed and effectiveness of their use for the purposes of summarization and retrieval augmented generation.

* **Why** -- why was it done? the purpose

This was done in order to improve the productivity of certain secretarial tasks within the US Navy. The Navy is a massive organization where many people correspond on a daily basis. In addition to this, large databases of testing and historical data need to be solicited for information. This is a slow process because much data has to be searched through, and this searching has to be done by a subject matter expert who can accurately interpret the data. These programs seek to reduce the time required and the knowledge level required to retrieve accurate information. I chose natural language processing as the active ingredient in solving this problem because it is the most effective tool we have for bridging the gap between computer and human comprehension of text.

* **Result** -- what was the result? what happened?

The result is a solid platform to test further models on. These models can be optimized for their purposes using the supercomputers available to the US Navy. Once these optimizations have been put into place, they can be further developed into end user products not only to accelerate the rate that work is accomplished in the Navy, but the whole Department of Defense and beyond.

* **Significance** -- what is the significance of what was done?

This is significant because unlike private corporations, the US Navy is both tax funded and relied upon for national security. This means that it is of the utmost importance to all Americans that it operates efficiently and effectively. These productivity tools, once fully implemented, will greatly improve both of these aspects.