As the only student contributor to this project, I would say that the areas of my greatest contribution were in assembling dataset similarity methodology and backmatter, assembling background on Synthetic Aperture Radar Automatic Target Recognition (SAR-ATR) systems for the final poster, and in development of the Bayesian network model and its user interface used to generate random sets of operating characteristics in the synthetic data generation pipeline. As far as building upon the skills I identified last fall, I continued to develop my technical communication skills via communicating with my advisor and other colleagues at Etegent Technologies; somewhat advanced my knowledge of deep computer vision systems via my contributions to Etegent’s proprietary machine learning experiment framework, ATLAS; gained a more nuanced understanding of how to conduct industry quality research; and gained insight into publishing research at the professional level, and information security practices when dealing with proprietary information.

I learned quite a bit about SAR imagery while working on this project, such as the idiosyncrasies of the data itself, but also how to manipulate it into a format suitable for deep computer vision models to process. As such, I gained additional competencies with using industry-standard computer vision tools and software libraries, such as Python and PyTorch. I also gained experience with the Vue Javascript Frontend Library, which I used to develop a user interface for the Operating Characteristic generation system used in the synthetic data generation pipeline. I further acquired experience with the challenges and requirements of long-term research projects of this sort, such as the kind of planning and execution required to see them succeed. I ran into real obstacles of motivation and discipline while working on this project over the past many months, and I intend to use my experience with this project to make the necessary changes to my work schedule and environment in the future to set myself up for success. For instance, I learned that without regular check-ins with others and the related deadlines they come with, I failed to adequately prioritize important, but not urgent tasks, such as allocating my personal time to develop the project and its components at times. With that said, I felt the project was ultimately a success, and should yield interesting results both in the literature and to my industry sponsor.

While there no other student contributors to the project for me to report upon, I feel it important to acknowledge my advisor and supervisor, Adam Nolan, as well as my various colleagues at Etegent Technologies for their support and expertise during development.