

### **Aidan Daly - Reflection:**

For this project, I personally worked mainly on data, model, and post-training visualization. I downloaded, visualized, and processed the data which can be found in sections 1 and 2 of the Google Colab document. I then worked on the model alongside my partner to determine which model we should use and how we should implement Grad Cam. For the training and testing, I worked on the accuracy function that tested our validation and testing sets. I also created a visualization for Grad Cam. I then made a visualization on the unlabeled dataset, which allows viewers to see what our model thinks of images it's never seen before. One other small thing I worked on was the ability to save the model to Google Drive during training. This was really important as it also allowed us to reload the model for viewing purposes. Now those who want to check out our Google Colab can utilize a trained model. For the report, I did the method, and experiments sections, along with the contributions.

One of my biggest challenges of this project was working with Grad-Cam. Learning how to visualize with grad cam was hard, but rewarding when we finally got to see how it all worked. It was mostly difficult because we couldn't really find examples online of people using Grad-Cam with pytorch and ResNet50. I eventually decided to tinker around and adapt another visualization on a different model to ours. This ended up working and we finally got to see how our model used Grad-Cam and which areas of the image had more emphasis on the prediction.

I've learned so much from this project. I'm most proud of the fact that I was able to learn how to actually augment a model, and have it work how we desired. This was what we did with Grad-Cam and it truly made a difference to our model. I learned a lot about collaboration and teamwork. I also learned even more about training and fine-tuning a model as well through helping my partner with areas he was uncertain about. I also spent a lot of time with our data. Attempting to add and take away augmentations to see how they affected our model learning, which is something I'm very happy to have learned as I believe it is an integral part of building a great model.

I believe that I deserve an A on this project. My partner and I have spent a lot of time and effort on this project, collaborating and working together to find solutions to our challenges. We worked throughout finals week juggling plenty of other things we had and came out with a project that we are extremely happy with and believe really works. Due to all of the effort spent on this project as well as a great outcome, I believe I earned an A. Thank you for the amazing semester!