Supplementary Information: Image Synthesis Using A Robust Classifier

Francesco Mastrocinque
Departments of Chemistry & Electrical and Computer Engineering
Duke University
Durham, NC 27708
fam21@duke.edu

Owen Gibson
Department of Electrical and Computer Engineering
Duke University
Durham, NC
ogg4@duke.edu

A Appendix

All materials for this paper including figure files, written text, and all code are hosted in a github repository located here: https://github.com/mastrofran/Exploring-Image-Synthesis-Using-a-Robust-Classifier

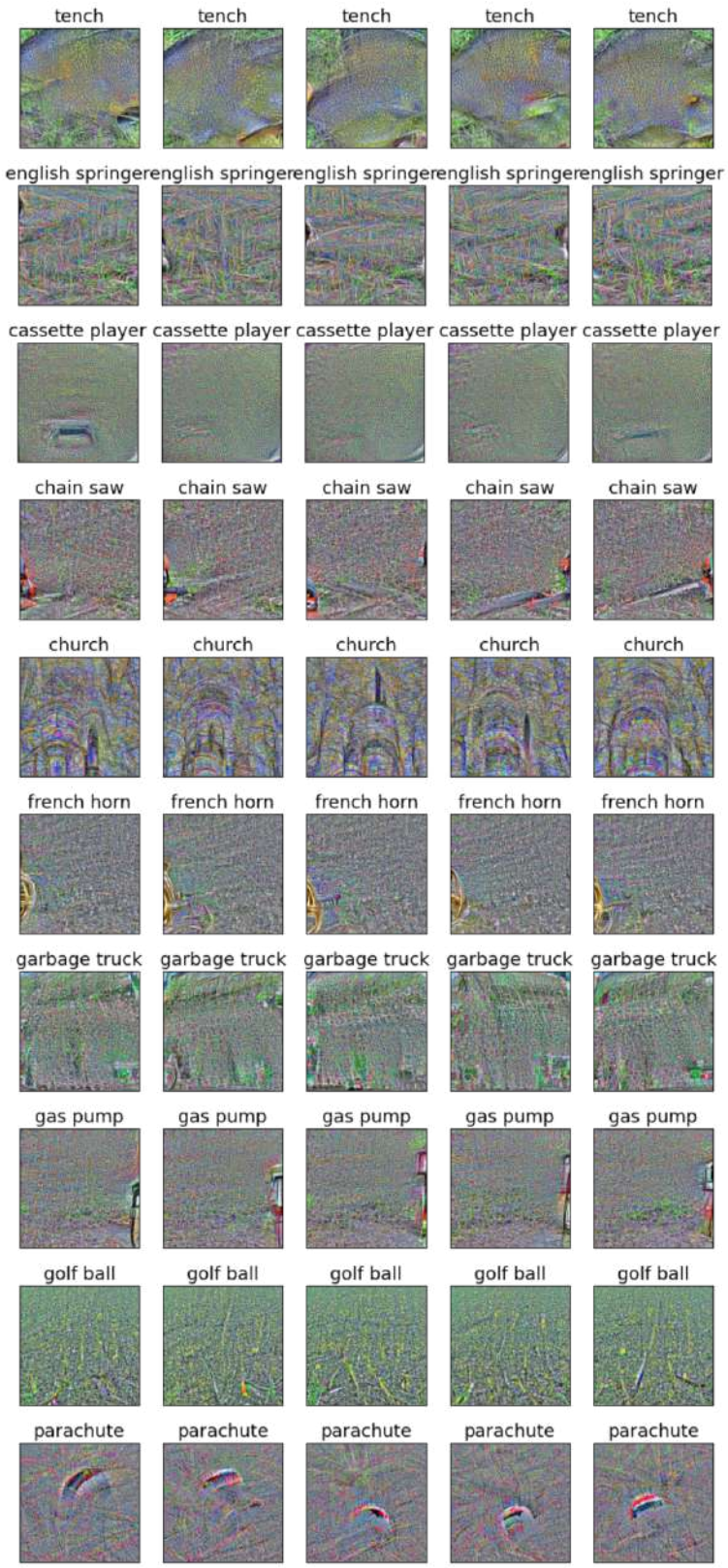

Figure 1: Sets of 5 image generation examples per class using a random seed image with 60 iterations and a robust classifier.

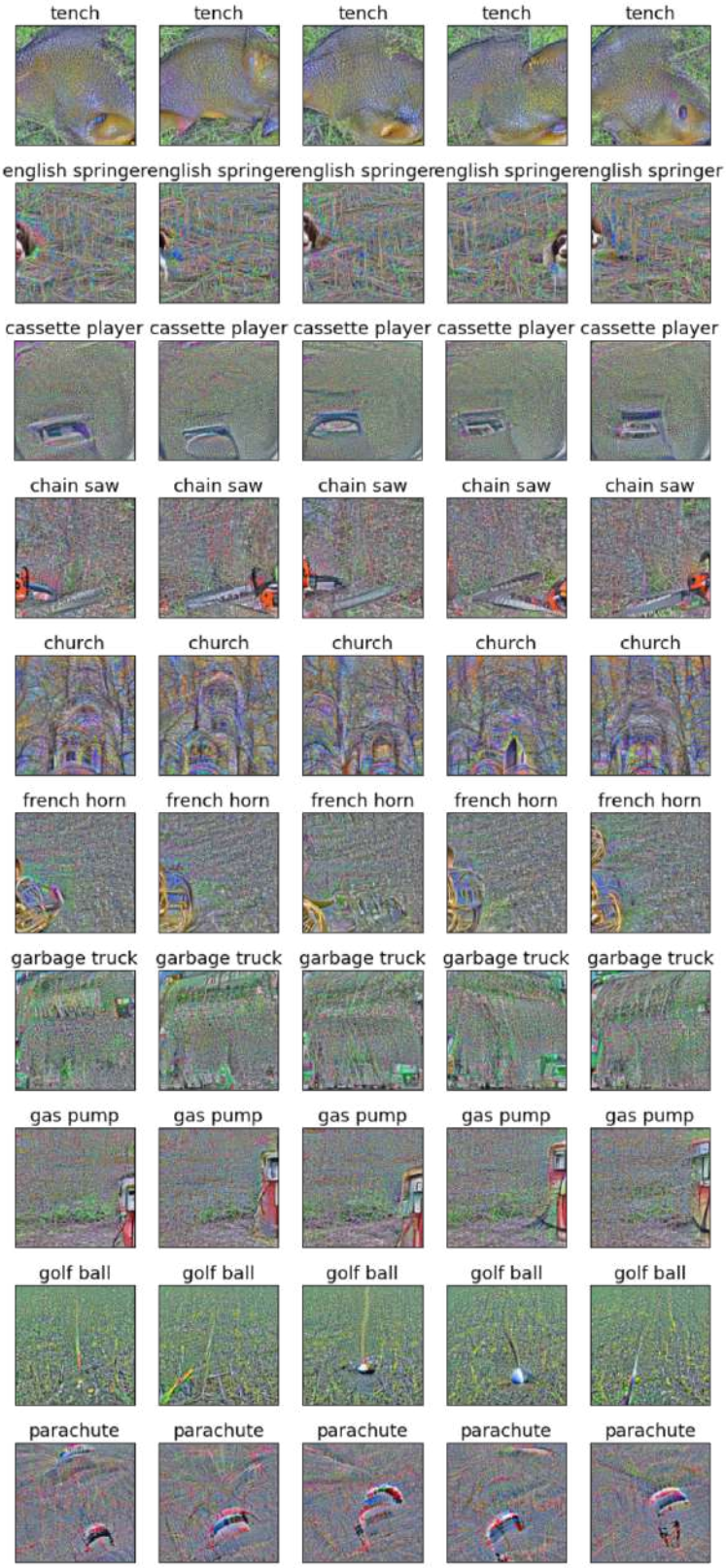

Figure 2: Sets of 5 image generation examples per class using a random seed image with 100 iterations and a robust classifier.

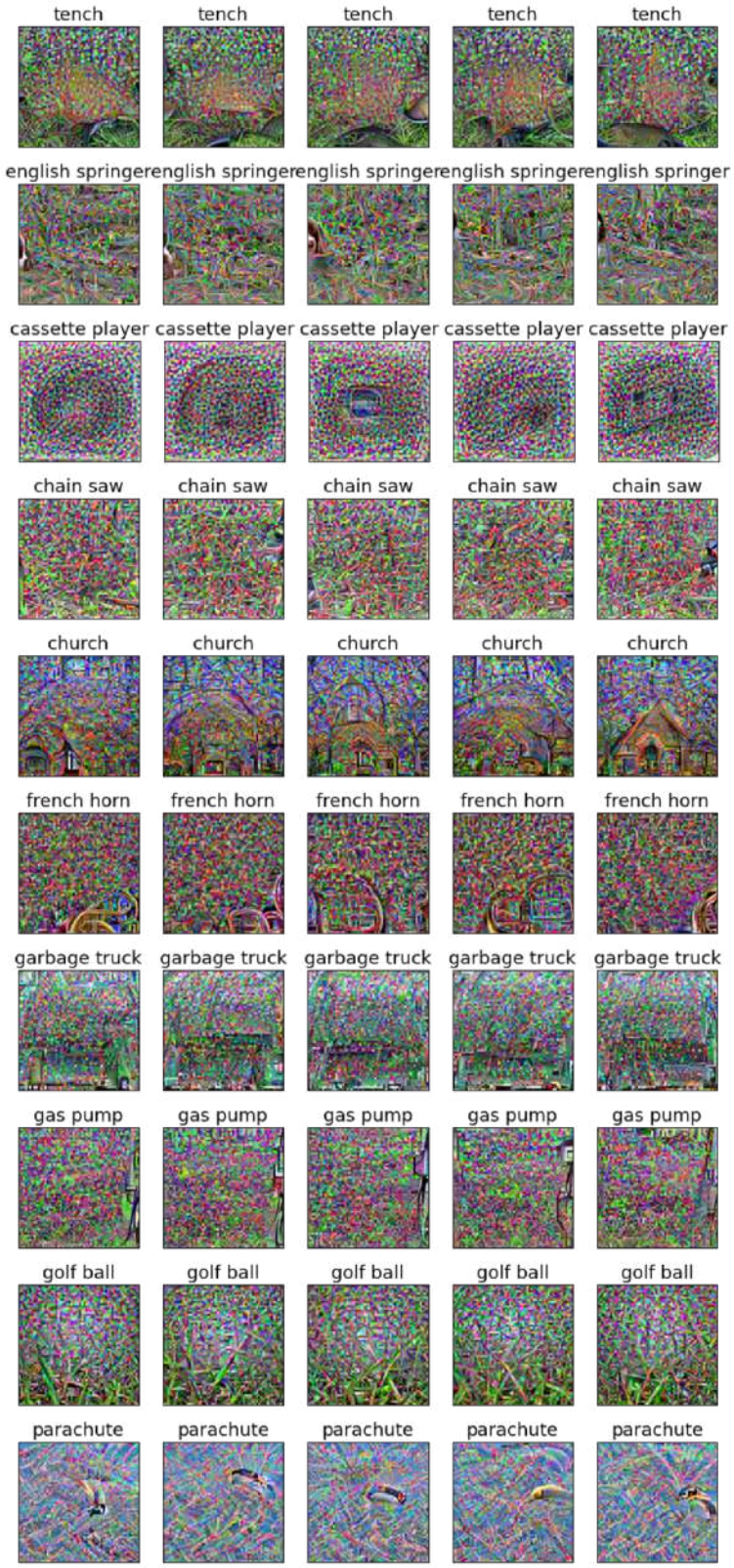

Figure 3: Sets of 5 image generation examples per class using a univariate normal distribution seed image with 60 iterations and a robust classifier.

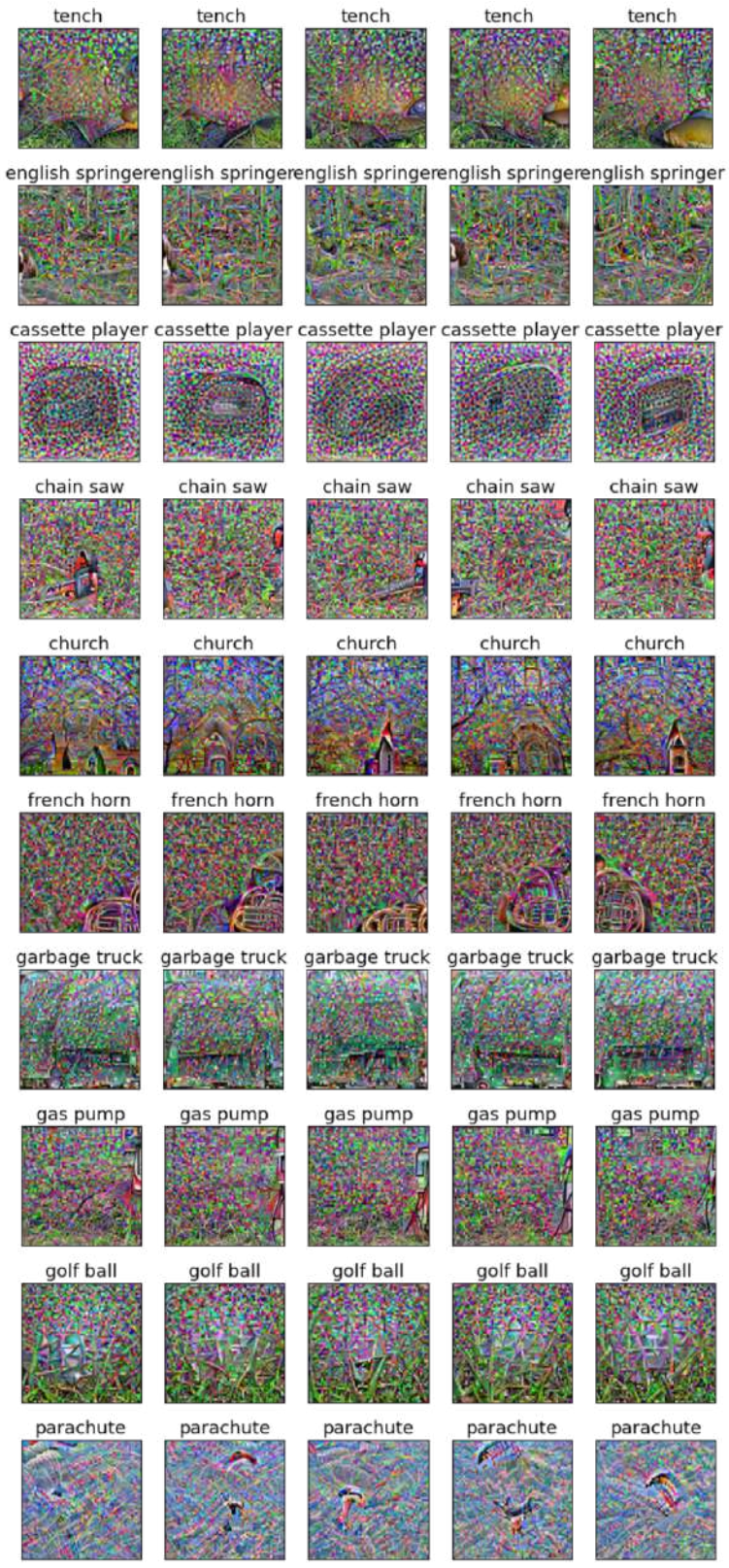

Figure 4: Sets of 5 image generation examples per class using a univariate normal distribution seed image with 100 iterations and a robust classifier.

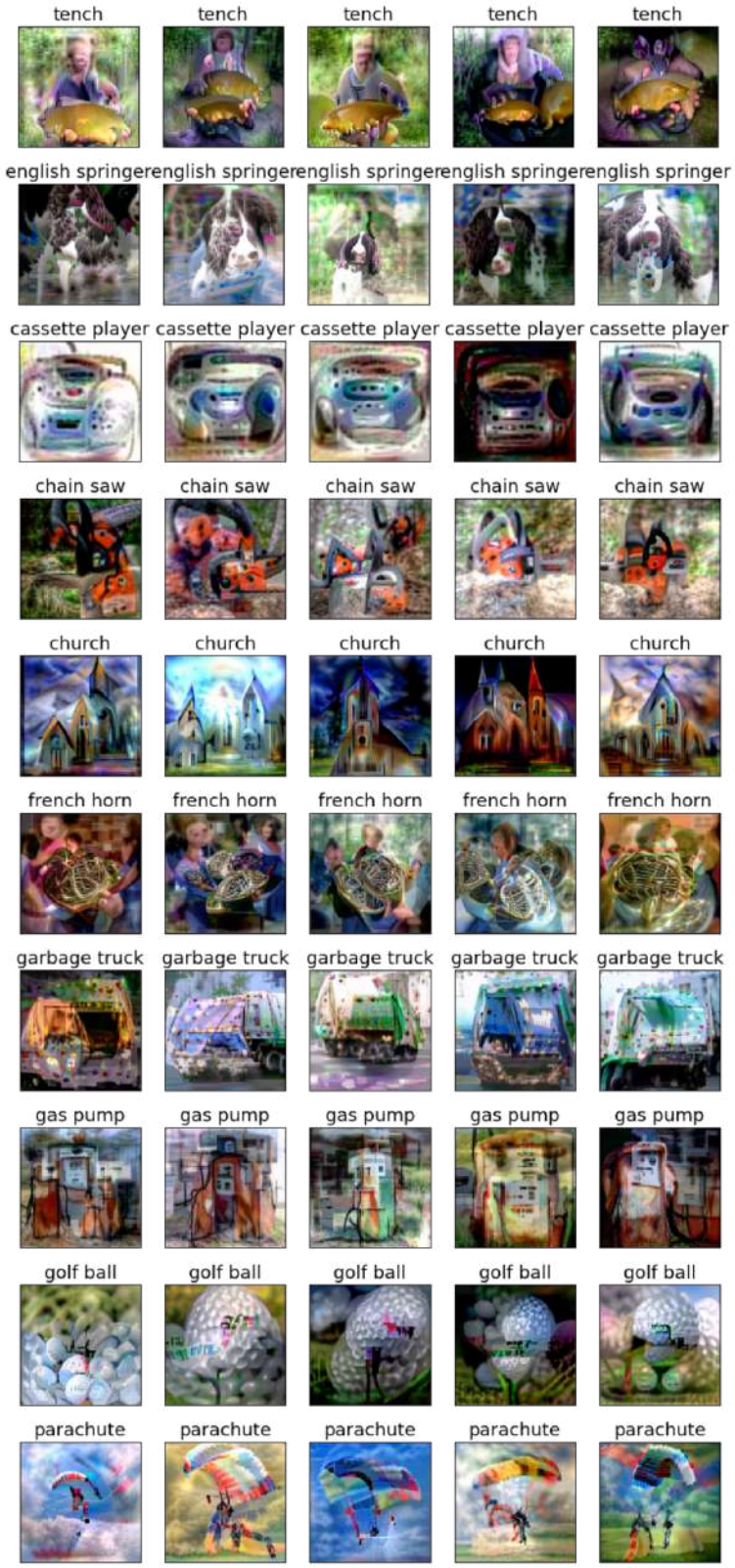

Figure 5: Sets of 5 image generation examples per class using a multivariate normal distribution seed image with 60 iterations and a robust classifier.

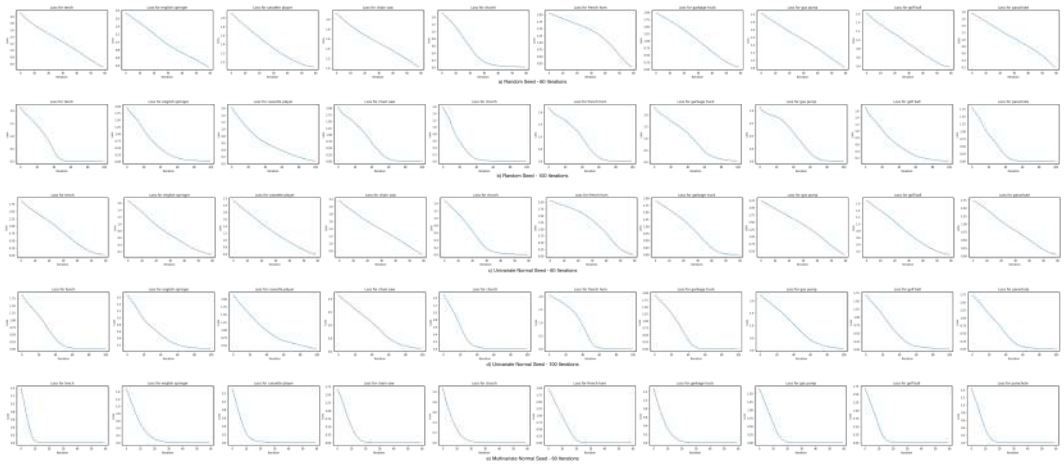

Figure 6: Loss as a function of PGD iterations for each seed distribution used for image generation with a robust classifier.

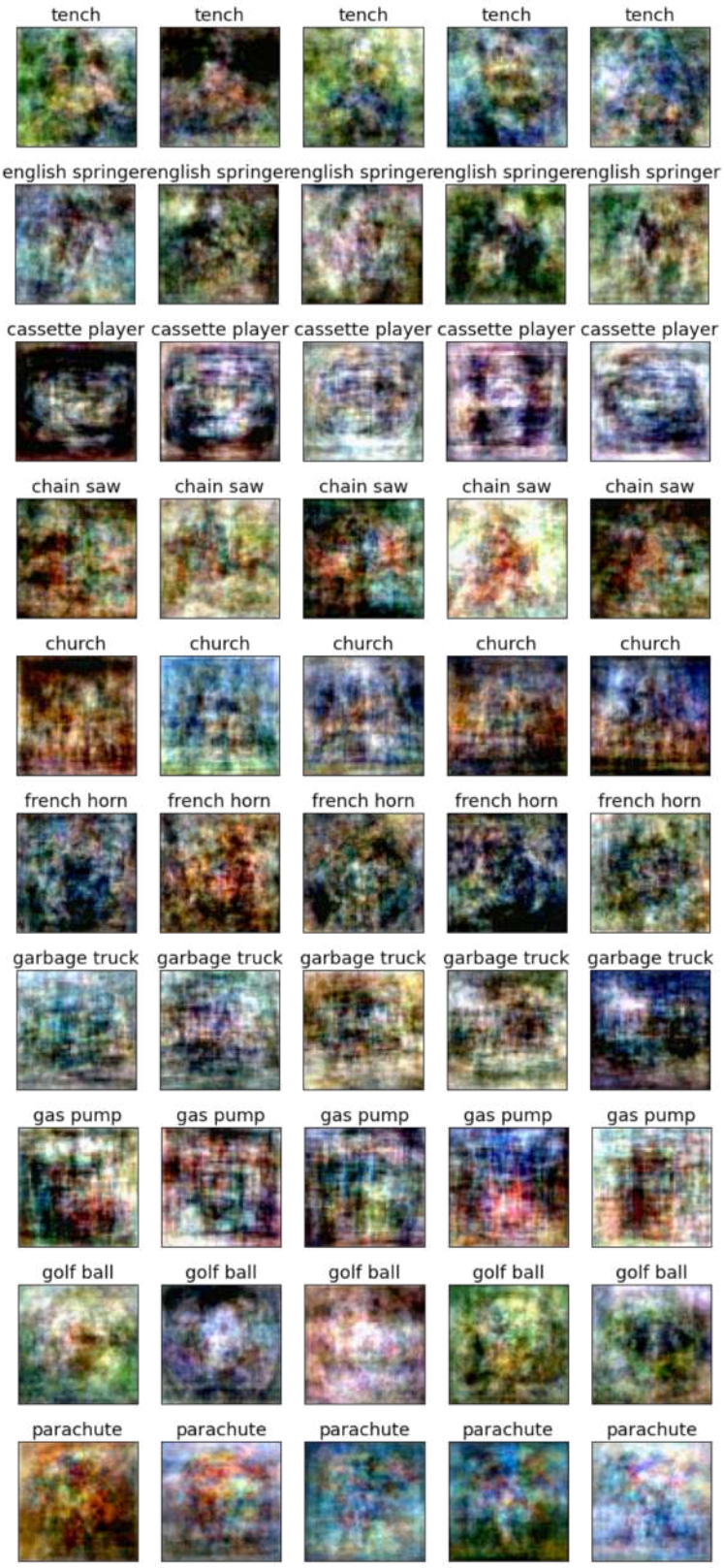

Figure 7: Sets of 5 image generation examples per class using a multivariate normal distribution seed image with 60 iterations and a non-robust classifier.

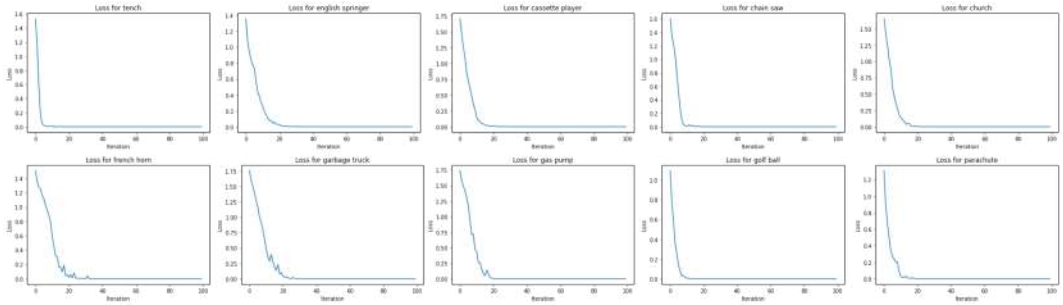

Figure 8: Loss as a function of PGD iterations for the multivariate seed distribution images used for image generation with a non-robust classifier.

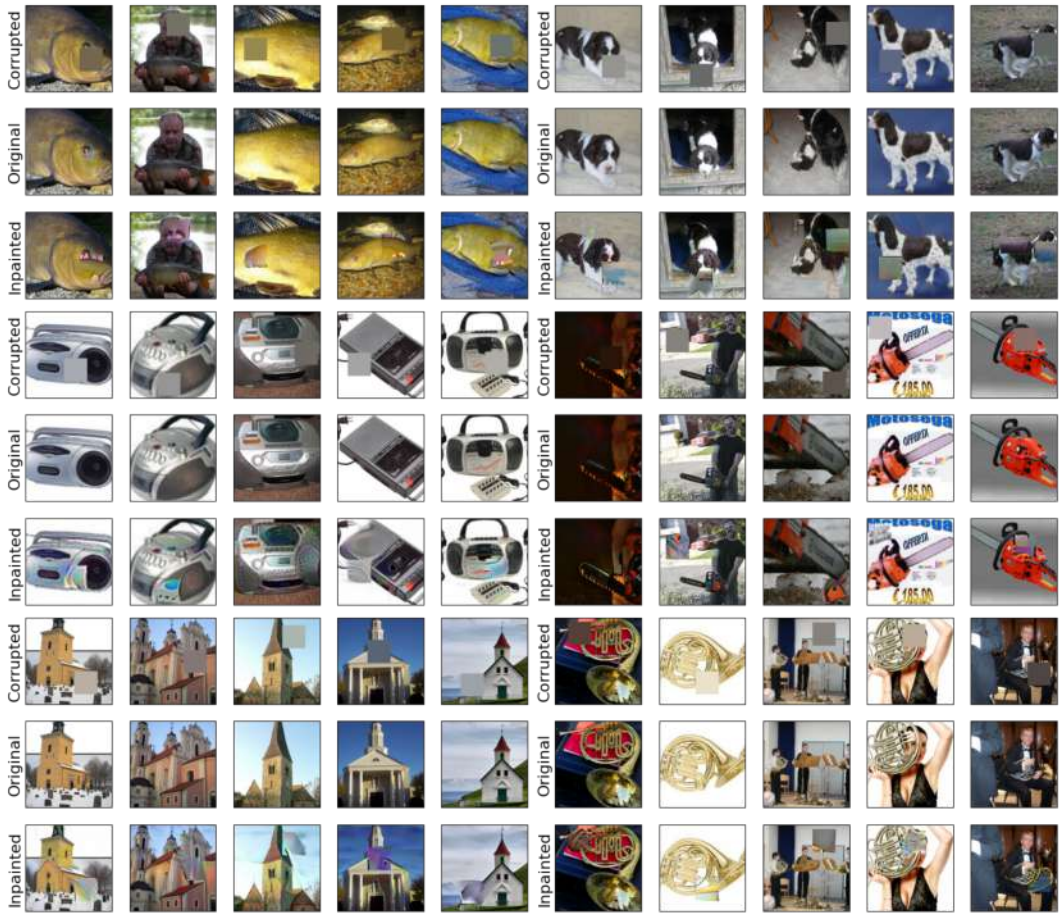

Figure 9: Inpainting of several sets of classes using a robust classifier with a 60 x 60 pixel patch.

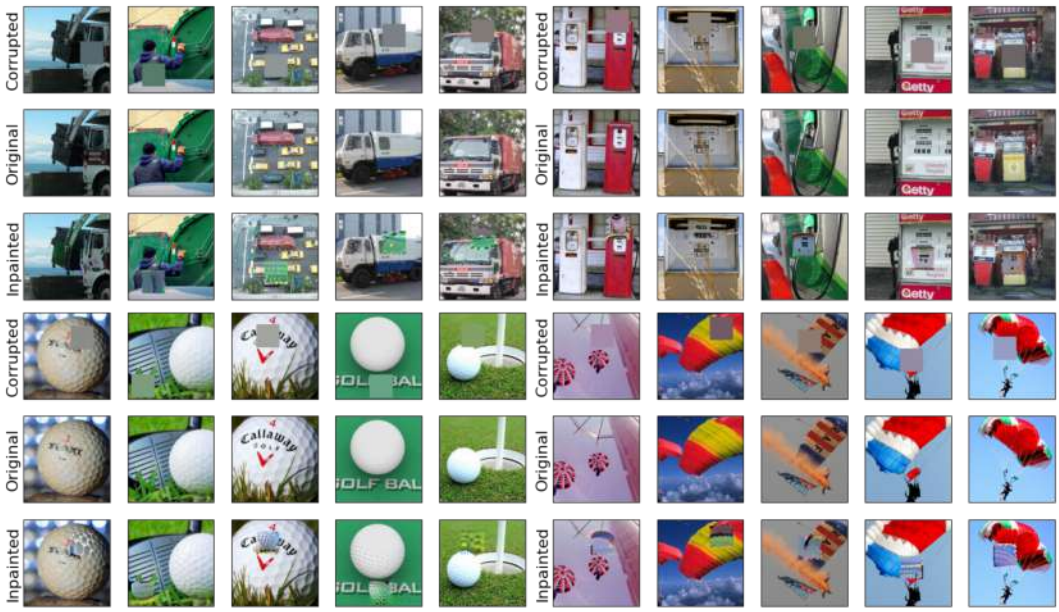

Figure 10: More inpainting exampless of several sets of classes using a robust classifier with a 60 x 60 pixel patch.