Mine-RCNN

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Abstract—Real time object detection has recently been made possible due to steady state-of-the-art advancements in the field [1], [2], these methods propose the use of a Region Proposal Network to identify Regions of Interest (RoIs) in the image and correctly classify them, we aim to reproduce the architecture proposed by [2] applied to a novel environment, that of the popular sandbox Minecraft, both for the ease-of-collection of the required data and for a number of graphical properties possesed by the game that make such a complex problem more approachable in terms of computational resources, moreover, due to the novelty of the environment, we also train the entirety of the network from the ground up, having no pre-trained backbone at our disposal.

Index Terms—Object Detection, Convolutional Neural Network, Sandbox, Region Proposal, Real Time Detection

1 Introduction

We do stuff.

References

[1] R. B. Girshick, "Fast R-CNN," *CoRR*, vol. abs/1504.08083, 2015. [Online]. Available: http://arxiv.org/abs/1504.08083

[2] S. Ren, K. He, R. B. Girshick, and J. Sun, "Faster R-CNN: towards real-time object detection with region proposal networks," *CoRR*, vol. abs/1506.01497, 2015. [Online]. Available: http://arxiv.org/abs/1506.01497