3. Convolutional Neural Networks

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Abstract

TODO: ABSTRACT GOES HERE

1 Introduction

To discover from images what is present in the world, where things are, what actions are taking place, to predict and anticipate events in the world.

2 What Computers "See"

Images are Numbers: An image is just a matrix of nnumbers [0, 255].
Tasks in Computer Vision
Regresssion: ouput variable takes continuous value
Classification: oupt variable takes class label. Can produce probability of belonging to a particular class.

High Level Feature Detection
- Let's identify key features in each image category
Manual Feature Extraction:
Domain knowledge -¿ Define features -¿ Detect features to classify