The emergence of online influencers, the explosion of video content, and the massive amount of movie collections have served as an advertising vehicle for the fashion industry. This trend has created the need for automated methods that recognize people's outfit in such image and video collections. However, existing computer vision solutions for fashion recognition require an enormous amount of labeled data for training, which is prohibitively expensive. In this work, we propose an approach to build clothing recognition models for real-world scenarios. Our approach exploits images from the Amazon Catalog as training data. By using the catalog data as an additional training source, we boost the recognition accuracy on the challenging real world images of the DeepFashion dataset achieving stateof- the-art performance. We introduce the first dataset for clothing recognition in movies. In this scenario, we find that the use of catalog data for training becomes even more crucial, as it provides an accuracy boost of 10%.