

1. INTRODUCTION

1.1. Background

Business is one of the sectors that receives many advantages from the growth of the Internet. Nowadays, people in business can improve their businesses by gathering and reading relevant information about the current situation. Also, they can use the Internet as a tool in many aspects such as marketing, selling, etc. Now, many small businesses started to sell their product on the Internet and many platforms, which they can use to put their product, ranging from social media to e-commerce [1].

E-commerce is a platform where people buy and sell things. It is popularized by big e-commerce companies like Amazon, e-bay, etc. E-commerce started growing worldwide, including in Indonesia. One of the earliest popular e-commerce in Indonesia is tokobagus.com, where most people sell secondhand products. From there, much more e-commerce platform started appearing, such as Tokopedia, Bukalapak, and Shopee. A lot of new e-commerce appearing show the massive potential of this business. One of the most recent e-commerce platforms is Instagram Shopping.

Instagram Shopping is a feature created by Instagram, one of the most prominent social media. Instagram Shopping has already appeared for a while (see Figure 1). However, Instagram only recently decided to put that feature on their bottom navigation bar (see Figure 2), which shows that they want to expand and give more attention to Instagram Shopping. Unfortunately, in the current version of Instagram, products on Instagram Shopping does not have any product labeling.

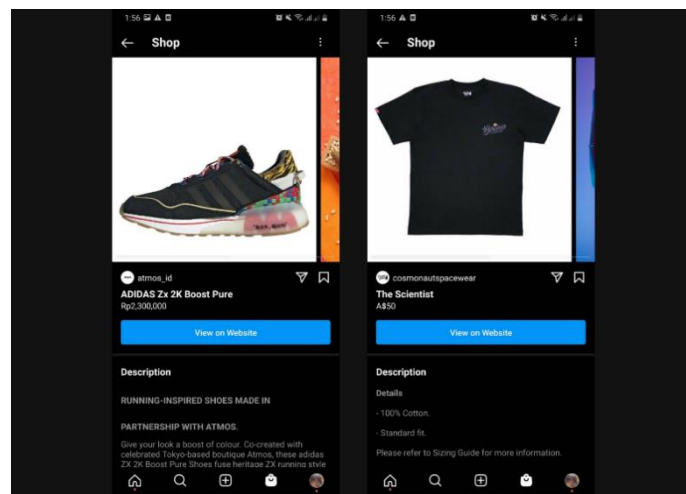


Figure 1 Instagram Shopping product page

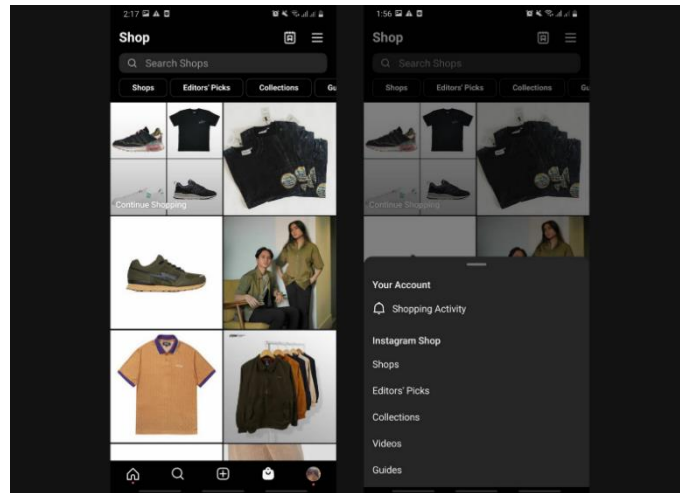


Figure 2 Instagram Shopping home page and navigation bar

The product label is one of the important features of e-commerce where customers can have a more understanding of some product and use it to search for the product by using the label. This feature allows customers to find another variety of products they are looking for.

The automatic labeling can be done by many computer vision methods. One of them is semantic segmentation. With semantic segmentation, it labels every pixel of the imagery, and it opens up many further possibilities. For example, a virtual try-on feature, where people can have their picture with the product.

1.2. Identification and Scope of the Problem

Based on the background of the problem, the problem identification to be raised are:

1. How to define a clothing type with semantic segmentation by using U-net?
2. How are the results of the segmentation?

1.3. Purposes

Based on the problem identification, the purposes of this research to be raised are:

1. Give a label of some image by defining the clothing type of each image.
2. Evaluate the result of the semantic segmentation.

1.4. Writing Organization

To reach the end of this research, the following activities will be carried out:

1. Problem Identification and Literature Study

At this step, the researcher tries to find problems related to semantic segmentation especially using U-net method, fashion classification and reads some related literature.

2. Research Planning

At this step, a needs analysis and system design will be carried out in accordance with the proposed topic.

3. Research implementation

Research on the problems raised in this study.

4. Evaluation of the Final Results

At this step, the results of the research that have been carried out will be evaluated according to predetermined parameters.

5. Compilation of Final Report

Contains the preparation of documents on the results of research that has been carried out.