

Introduction

At The Fitting Room, we are modernizing the world of fashion with the help of technology. So, when it came to choosing a task for this round, we decided that we will choose something in the realms of fashion.

This assessment is intended to be an exercise in understanding your abilities in designing a system, optimizing the solution and maintaining a neat implementation. This assessment is not just a test of your coding acuity. We want to understand your process, thoughts and assumptions. We want to understand the choices that you made when designing your implementation.

The problem statement is as follows, **design and implement a system that computes visual similarity. Think of a visual search engine that provides you with similar searches when given an image input.**

Resources

- [1]<https://www.kaggle.com/paramaggarwal/fashion-product-images-dataset>
- [2]<https://www.kaggle.com/paramaggarwal/fashion-product-images-small> (smaller dataset than [1].)
- [3]<https://medium.com/datadriveninvestor/deep-learning-generative-adversarial-network-k-gan-34abb43c0644>
- [4] <http://cs231n.stanford.edu/reports/2017/pdfs/302.pdf>
- [5] <https://pytorch.org/>
- [6] <https://www.tensorflow.org/>
- [7] <https://redis.io/>
- [8] <https://oss.redislabs.com/redisai/>
- [9] <https://pypi.org/project/ray/>
- [10] <https://arxiv.org/pdf/1512.09300.pdf>
- [11] https://www.researchgate.net/publication/336728075_A_Visual_Similarity_Recommendation_System_using_Generative_Adversarial_Networks

[1] and [2] are the dataset that you can use for solving the problem.

Submission Details

Kindly share any papers you may read, or any other papers you may find online that you think will assist in solving the problem. We would also appreciate an insight into the provided resources. You can explain the various assumptions, optimizations and algorithms you would implement, and why you think those would help your design.

We understand that this will take a significant amount of time to develop and analyse and we are ready to accommodate you. We are confident that the system that would be designed will be properly analysed before implementation.

We hope that you will not use ready-made solutions (in the form of various libraries and modules available online) to present your implementation. While this is a non-issue, we are really hoping to evaluate your ability to read papers and use the various insights to a custom solution.

We are hoping that you would **dockerize the container** so that we can run it easily when evaluating it. We do not mind if you **share with us a public GitHub repository** so that the implementation remains as an addition to your work samples.

We are hoping that you **document and optimize your design**.

If you have any questions, kindly contact Advait at advait@thefittingroom.tech