

AUTOMATIC GENERATION OF GARMENT DESIGNS
USING GENERATIVE ADVERSARIAL NETWORKS

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Degree of Master of Science

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Declaration

I declare that this is my own work and this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any other University or Institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text. I retain the right to use this content in whole or part in future works (such as articles or books).

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The above candidate has carried out research for the Masters thesis under my supervision. I confirm that the declaration made above by the student is true and correct.

Signature of the supervisor: *UOM Verified Signature*

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Abstract

Generative models like GANs are able to generate realistic samples [1] <https://thispersondoesnotexist.com>. GANs have been used in the fashion domain as well. Manipulating attributes of a given garment [2], filling a garment sketch using a given fabric [3], generating new clothing on an image of a wearer through text description [4] are a few of such usages. However modeling a distribution of the dresses and manipulating the attributes of the generated dresses are not up to date with the advancement of the GANs. Firstly, the current state of the art GAN models and their applicability for the dress images is analyzed. Then the methods of manipulating the attributes of generated dresses by interpreting the latent space are explored. Finally, the application of the GANs for dress images and a way to interpret the latent code to manipulate the dress attributes successfully are presented with results.

Keywords: garment design generation, GAN

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