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## Patent Search

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### Abstract:

Text to picture is a standardised approach of automatically creating images from text. With advances in creating realistic pictures from natural language descriptions, recent works concentrate on text-to-image translation. Conditional generative models are used in the typical "text to picture" method to automatically create images from text. Accurately displaying textual and visual information presents challenges. Generative adversarial networks can generate high-quality images, but they have trouble accurately reflecting input phrases. While samples produced by text-to-image approaches can convey the intended idea, important elements are frequently left out. Based on conditioned word descriptions, this study creates 256x256-pixel, image-sensitive images using an Attention Generative Adversarial Network. Basic design and colour palettes are informed by the GAN drawings phase, while realistic, high-resolution images are produced by further GAN phases. Customised image modifications can be achieved by employing a Style-based Generator, while conditioning augmentation stabilises GAN training and enhances sample quality.

### Complete Specification

#### Description:Field of Invention

The present invention is a NLP field. The Invention is based on deep neural network model that can classify Text Description to Image Generation.

#### The Objectives of this Invention

The primary aim of Text Description to Image Generation utilizing Generative Adversarial Networks (GANs) is to develop a model capable of producing realistic and contextually meaningful images based on textual descriptions given as input. This objective represents an ambitious effort to overcome the gap between natural language and visual comprehension, with the ultimate goal of empowering machines to effectively translate human language into visually coherent images. By achieving this, the intention is to enable machines not only to comprehend textual descriptions but also to generate images that accurately capture the essence and details conveyed in the language, thereby enhancing the communication and interaction between humans and machines in a visually intuitive manner. This endeavor serves as a pivotal step toward advancing artificial intelligence's ability to understand and interpret human language in a more holistic and nuanced manner, facilitating applications in various fields such as computer vision, content creation, and human-computer interaction.

#### Background of the Invention

In [US20190286950A1] Generative Adversarial Networks (GAN; Goodfellow et al., 2014) have recently shown their usefulness in creating higher-quality photos, triggering a flurry of proposed enhancements. Several strategies have been presented to address the shaky training dynamics of GAN and provide more convincing outcomes (Salimans et al., 2016; Arjovsky and Bottou, 2017). Provisional generative adversarial networks (cGANs) have demonstrated usefulness in picture generation from text (Mirza and Osindero, 2014; Denton et al., 2015) [US20200160153A1]. GAN is used by (Reed et al., 2016b) to generate pictures that are nearly indistinguishable from the

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