# Image and Video-Based Artistic Stylisation: Computational Imaging and Vision #42

Image and video-based artistic stylisation is a rapidly growing field of research that sits at the intersection of computer graphics, computer vision, and machine learning. Artistic stylisation techniques allow us to transform images and videos into works of art, and can be used for a variety of applications, such as image editing, video editing, and game development.



### Image and Video-Based Artistic Stylisation (Computational Imaging and Vision Book 42)

by Philippe Besson

4.1 out of 5

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Text-to-Speech : Enabled

Screen Reader : Supported

Enhanced typesetting : Enabled

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#### Techniques for Image and Video-Based Artistic Stylisation

There are a number of different techniques that can be used for image and video-based artistic stylisation. Some of the most common techniques include:

 Neural style transfer: Neural style transfer is a technique that uses deep learning to transfer the style of one image to another. This technique can be used to create new images that have the look and feel of famous paintings or other works of art.

- Texture synthesis: Texture synthesis is a technique that can be used to create new images that have the same texture as an existing image. This technique can be used to create realistic textures for 3D models, or to create new images that have a unique and distinctive look.
- Image editing: Image editing software can be used to apply a variety of artistic effects to images. These effects can include filters, brushes, and other tools that can be used to create a variety of different looks. Image editing software can also be used to combine multiple images into a single composite image.
- Video editing: Video editing software can be used to apply a variety of artistic effects to videos. These effects can include filters, transitions, and other tools that can be used to create a variety of different looks.
  Video editing software can also be used to combine multiple videos into a single composite video.

#### **Applications of Image and Video-Based Artistic Stylisation**

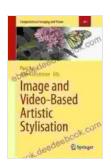
Image and video-based artistic stylisation has a wide range of potential applications. Some of the most common applications include:

- Image editing: Artistic stylisation techniques can be used to edit images and create new works of art. These techniques can be used to enhance the look of photos, create unique digital paintings, or even create new textures for 3D models.
- Video editing: Artistic stylisation techniques can be used to edit
   videos and create new works of art. These techniques can be used to

add artistic effects to videos, create unique visual effects, or even create new animated content.

- Game development: Artistic stylisation techniques can be used to create unique and visually appealing graphics for video games. These techniques can be used to create realistic textures, create unique characters and environments, or even create new visual effects.
- Research: Artistic stylisation techniques are also being used for a variety of research applications. These applications include studying the human visual system, developing new computer vision algorithms, and creating new machine learning models.

Image and video-based artistic stylisation is a rapidly growing field of research with a wide range of potential applications. As new techniques are developed, we can expect to see even more innovative and creative applications of this technology.



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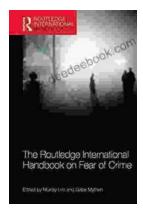
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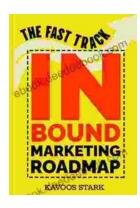
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