# Orthogonal Image Moments for Human Centric Visual Pattern Recognition Cognitive

Orthogonal image moments are a powerful tool for representing and analyzing images. They are invariant to translation, rotation, and scale, and they can be used to extract a wide range of features from images. This makes them ideal for use in human centric visual pattern recognition cognitive, where the goal is to understand how humans perceive and interpret visual information.

Orthogonal image moments were first introduced by Hu in 1962. They are based on the idea of representing an image as a weighted sum of orthogonal polynomials. The weights of the polynomials are called the moments of the image.

The most common type of orthogonal image moments are the Zernike moments. Zernike moments are defined as the coefficients of the Zernike polynomials, which are a set of orthogonal polynomials that are defined over the unit circle.

Orthogonal Image Moments for Human-Centric Visual Pattern Recognition (Cognitive Intelligence and Robotics) by Krishna Sankar

★★★★★ 5 out of 5

Language	: English
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Text-to-Speech	: Enabled
Screen Reader	: Supported
Enhanced typesetting	: Enabled
Print length	: 231 pages
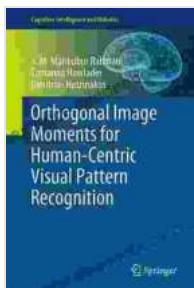
Zernike moments have a number of desirable properties that make them ideal for use in image analysis. They are invariant to translation, rotation, and scale, and they can be used to extract a wide range of features from images.

Orthogonal image moments have a wide range of applications in human centric visual pattern recognition cognitive. Some of the most common applications include:

- **Object recognition**. Orthogonal image moments can be used to recognize objects in images. This is done by comparing the moments of the image to the moments of known objects.

- **Face recognition**. Orthogonal image moments can be used to recognize faces in images. This is done by comparing the moments of the image to the moments of known faces.

- **Gesture recognition**. Orthogonal image moments can be used to recognize gestures in images. This is done by comparing the moments of the image to the moments of known gestures.

- **Medical imaging**. Orthogonal image moments can be used to analyze medical images. This is done by extracting features from the images that can be used to diagnose diseases.

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- [1] Hu, M.-K. (1962). Visual pattern recognition by moment invariants. IRE Transactions on Information Theory, 8(2),179-187.

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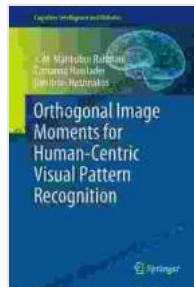
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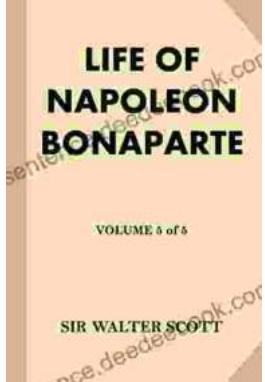
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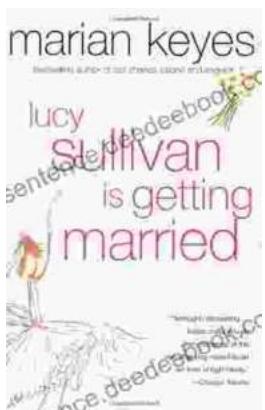
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