Intelligent understanding of user input applied to arc-weight estimation for graph-based foreground segmentation

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On the Improvement of Image Feature Matching under Perspective Transformations

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Visual features & matching

1. Input images

2. Feature extraction
   • Geometric information (position, scale, orientation)
   • Feature descriptor

3. Feature matching
   • Correspondence pairs

Proposed feature matching algorithm

• Uses both descriptors + geometric data → Outlier rejection
• Segments image into regions of consistent transformations → Large perspective changes, dynamic scenes
Sparse Representations for Efficient Shape Matching

- Quadratic assignment formulation
- BP optimization via min-convolution
- Polygonal approximations for contours