PLACE RECOGNITION WITH ConvNet LANDMARKS:
VIEWPOINT-ROBUST, CONDITION-ROBUST, TRAINING-FREE

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1 Visual Place Recognition

2 The Challenges

Seasons

Viewpoints

Occlusions, Dynamics

Weather, Lighting, Shadows

3 ConvNets for Place Recognition

6 ConvNets for Place Recognition

5 ConvNet Landmarks

4 Which Layer is Best?

6 Hashing for Performance Gain

7 Semantic Search Space Partitioning

Take Home Messages
1) mid-level ConvNet features are robust in changing conditions
2) use as landmark descriptors
3) no training required, use general purpose networks

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