

SIFT SLAM Vision Details

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Outline

- Lightning Summary
- Black Box Model of SIFT SLAM Vision System
- Challenges in Computer Vision
- What these challenges mean for visual SLAM
- How SIFT extracts candidate landmarks
- How landmarks are tracked in SIFT SLAM
- Alternative vision-based SLAM systems
- Open questions

Lightning Summary

- Motivation: SLAM without modifying the environment
- Landmark candidates are extracted by the SIFT process
- Candidates matched between cameras to get 3D positions
- Candidates pruned according to consistency w/ robot's expectations
- Survivors sent off for statistical processing