Query by Video for Surgical Activity

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Goals:

• Design surgical video encoding for nearest neighbor querying of database.

Significance:

• Part of overarching project to generate automated feedback for cataract surgery videos.
• Querying database for similar videos that already have commentary will help generate new commentary on query video.

Results:

• Achieved 71.1% classification accuracy with our encoding pipeline.
• Showed that using tool information is useful.
Example Video Queries