

Query by Video for Surgical Activity

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Goals:

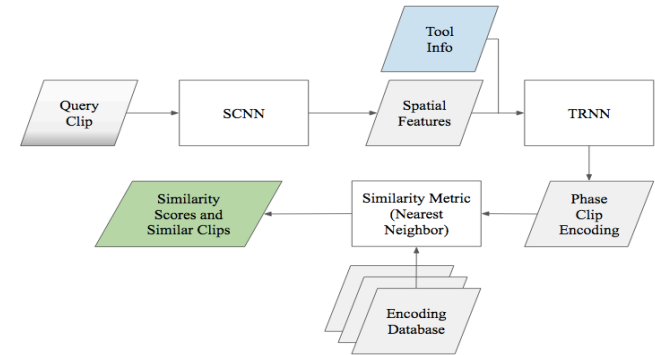
- Design surgical video encoding for nearest neighbor querying of database.

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.



Analysis of Results

Successes:
96
Failures:
39
Accuracy:
0.711



Example Video Queries

