An Implementation of the “Live-Wire” Image Segmentation Tool

Based on the paper “Interactive live-wire boundary extraction” by W. Barrett and E. Mortensen

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Final Project Report

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***Abstract*−**Write stuff about this paper here

# Introduction

# Previous Work

# Methodology and Implementation

In order to keep from re-inventing the wheel, this implementation of the live-wire tool utilizes the OpenCV computer vision library. It was desirable early on to use a language and environment that provides both good application performance (especially during graph expansion) and implementation speed and safety. OpenCV, though powerful, has a standard C++ API interface. Though C++ has the quality of creating high performance native code, it provides a tedious implementation experience. Thus, this live-wire implementation is based in Java and interfaces the OpenCV libraries via the JavaCV wrapper APIs. Java provides the performance needed for this application while maintaining a safer and higher speed implementation environment.

## Feature Extraction

## Local Costs

## Graph Expansion

## Live-wire boundary

## Closed Boundary Detection

## Boundary and Segment Extraction

# Results

# Conclusion

# References

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| [1] | W. A. Barrett and E. N. Mortensen, "Interactive Segmentation with Intelligent Scissors," *Graphical Models and Image Processing,* pp. 349-384, 1998. |
| [2] | W. A. Barrett and E. N. Mortensen, "Interactive live-wire boundary extraction," *Medical Image Analysis,* vol. 1, pp. 331-341, 1996/7. |