Capstone
Gather Valuable Information on Headstones as an Automated Process

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Overview

Capstone
Introduction

- Information available
  - Geneological information
  - Headstone location
- Need for automated process
  - Number of headstones
  - Challenge of manual data gathering
Related Research

- Noisy OCR
- Commercial apps
  - Google Goggles
  - Business Card Readers
Methods

- Photo capture
- Segmentation
- Image Filtering
- OCR
Photo Capture

- iPhone 4
- Basic needs
- libexif to extract geotagging
Segmentation

- Watershed tobogganining
- Determining areas of interest
- Graph cut on TRAPs
Image Filtering

- Rotatation
- Blurring
OCR

- Importance of Image Filtering
- Common fonts
- Tesseract OCR
Application
Future Work

- Automated segmentation
- Noise removal
  - Shadows and glares
  - Stone texture, artwork
- Text rectification
- OCR engine
- Integration into mobile app
Conclusion

- Automate information extraction
  - Geotagging
  - Segmentation
  - Image Filtering
  - OCR
- Index the information found