Program with Images: Pitfalls

Diane Theriault & Margrit Betke
Tools of the Trade

• OpenCV is a widely used, open source computer vision library maintained by Intel
• Provides libraries for image I/O, movie I/O and camera capture
• Industrial strength computer vision and image processing implementations
• GUI toolkit
Tools of the Trade

• Irfanview is a freely available image viewer
• Good at batch processing of image frames
Common Gotcha’s

• Sometimes the mapping from a weird looking image to the actual error is not obvious
Common Gotcha’s Color Order

- RGB vs. BGR
Common Gotcha’s
Wrong Width

Incorrect width can result in an image with
strong diagonal structure

Actual width: 512

This image width: 508
Common Gotcha’s
Wrong Color Depth

• Mismatched color depth can result in an image with a rainbow effect
Common Gotcha’s Windows line endings

- On Windows, it is critically important to open image files in binary mode.
- Otherwise, Windows helpfully strips out any bytes with value ‘\r’ (20).