

Automatic Document Orientation

Session 4

Computer Vision Group
IIT Madras

November 4, 2014

Outline

1 Gradients

- X derivative
- Y derivative

2 Histograms

- Intensity histogram
- Gradient Histogram

3 Rotation

X derivative

Image Gradient

party will be permitted to disclose any of the Confidential Information, unless required for the performance of the Permitted Application, the Receiving Party may use the information to its affiliates, employees, advisors or representatives provided that such personnel are informed of the confidential nature of the Confidential Information.

- a. These personnel agree to be legally bound to the same burdens of non-disclosure as the Receiving Party;
- b. These personnel agree to be legally bound to the same burdens of non-disclosure as great extent as the Receiving Party from violating this agreement, to the extent that the Receiving Party can reasonably enforce; and
- c. The Receiving Party agrees to be responsible for and indemnify the Disclosing Party for any breach of this Agreement by the personnel.

If the Disclosing Party has given written consent to the Receiving Party for the disclosure of information to a third Party, or if the Receiving Party is required, governmental, administrative, legislative or judicial body, provided that the Receiving Party will first give prompt notice to the Disclosing Party of any possible or prospective orders of disclosure and Employer has been afforded a reasonable opportunity to prevent or limit such disclosure.

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Y derivative

Image Gradient

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Intensity Histogram

Histograms

Party will be permitted to disclose any of the Confidential Information in instances:

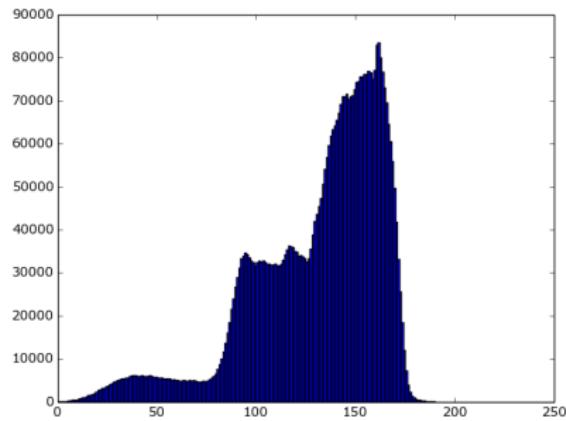
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Gradient Histogram

Histograms

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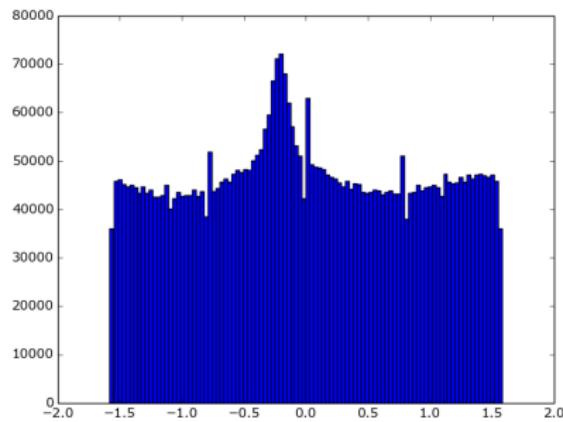
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Rotation

Image Orientation

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Summary

Today's session

- Finding the orientation of the document using gradients
- Rotation of Image

Tomorrow's session

- Template Matching
- Pattern Detection