

ADAMS

Advanced **D**ata mining And Machine learning **S**ystem

Module: adams-imaging-boofcv



Peter Reutemann

January 8, 2020

©2009-2015



THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato



Except where otherwise noted, this work is licensed under
<http://creativecommons.org/licenses/by-sa/4.0/>

Contents

1	BoofCV	5
2	Object tracking	7
3	Object conversion	9
	Bibliography	11

Chapter 1

BoofCV

BoofCV is an API for real-time computer vision and robotics applications[2].

The following actors are available:

- `source.WebcamImage` – obtains frames from the default webcam.
- `transformer.BoofCVTransformer` – performs a transformation using an existing BoofCV transformer class on the incoming image and outputs another image again.
- `transformer.BoofCVDetectLines` – detects lines in images using a Hough line detector based on polar parametrization.
- `transformer.BoofCVFeatureGenerator` – turns a `BoofCVImageContainer` into an `weka.core.Instance` object to be used in WEKA. The attached meta-data in form of a report can be added to the output object as well.

Chapter 2

Object tracking

TODO

Chapter 3

Object conversion

The following conversions are available to convert from one format into another:

- *BoofCVImageToBufferedImage* – for BoofCV to JAI/ImageMagick conversion.
- *BufferedImageToBoofCV* – for JAI/ImageMagick to BoofCV conversion.

Bibliography

- [1] *ADAMS* – Advanced Data mining and Machine learning System
<https://adams.cms.waikato.ac.nz/>
- [2] *BoofCV* – BoofCV is an open source Java library for real-time computer vision and robotics applications.
<http://boofcv.org/>