GStreamer and OpenCV using a GstOpenCV element

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October 21, 2017

Computer Vision

- Medical diagnosis
- Manufacturing flaws
- Entertainment, sports
- Military

OpenCV and GStreamer

OpenCV

It includes several hundred computer vision algorithms accessible over an extensive API.

GStreamer

It handles all types of multimedia content.

GstOpenCV

It is a framework that includes base classes, utilities and example algorithms that ease GStreamer and OpenCV integration.

It takes care:

- Build system hassle
- Efficient buffer handling
- Quick prototyping

Simple Example

Advantages

- No GStreamer code
- Full written in C++
- Import OpenCV modules

```
class Algorithm
{
public:
  virtual ~ Algorithm ();

  virtual bool
  process (cv::Mat &inouts);
  virtual bool
  process (cv::Mat &input, cv::Mat &output)
};

// Algorithm Registration //
GST_CV_ALGORITHM (foo, "foo algorithm",
    "RidgeRun <support@ridgerun.com>");
```

Complex Examples

Sophisticated Base classes

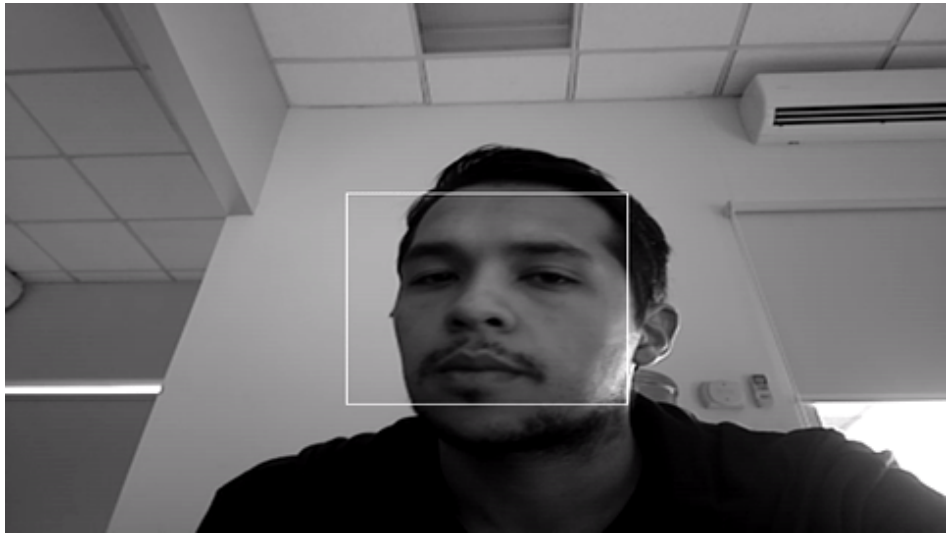
that handle:

- Multiple input $\rightarrow$ Single Output algorithm
- Single input $\rightarrow$ Multiple Output algorithm
- Multiple Input $\rightarrow$ Multiple Output algorithm
- Temporal analysis

GstOpenCV Face detection

Characteristics

- OpenCV FaceDetect Module
- Nvidia Tegra TX1 platform
- CUDA accelerated



More information: GStreamer-OpenCV face detection for Tegra X1

Contact Us

- Web-page: www.ridgerun.com
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Thank you