Person Detector

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1 Introduction

2 Gabor Filter

A band pass filter generated by a function of various parameters.

$$filter(x, y; \sigma, \theta, \lambda, \gamma, \phi) = exp[-\frac{x^2 - \gamma^2 \cdot y^2}{2\sigma^2}] \cdot exp[i(2\pi\frac{x}{\lambda} + \phi)] \quad (1)$$

The parameters of ksize allows to select the size of our kernel filter, in case we are using a really big shape we will overlook details if the shapes are small. The same reasoning can be applyed with a small filter, may overlook shapes too big for it. Therefore, must be tested with different sizes to reach an idoneal spot, if your features are tiny or bigger, you have to take that in count.

A common practice is to generate a **bank** of filters by changing the different parameters introduced previously.

If we are looking for **horizontal-like** features, applying an horizontal filter will allow us to maintain those characteristics and block the vertical ones and viceversa in the other cases.

3 What form do the People have?