

44/2 9/28/17

Case Study : Local Features & Geometric Invariance

$$\Rightarrow E(T, I, W) = \sum_{(x,y) \in W} (I(T(x,y)) - I(x,y))^2$$

$T = (u, v)$
Translation

$$\Rightarrow E(T, I, W) \approx \sum_{(x,y) \in W} (I_x(x,y)u + I_y(x,y)v)^2$$

Intuitive Argument

u is motion in horizontal direction
and I_x captures that.

