

## **Project 2: Feature Detection and Matching**

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## **Introduction**

### **Step 1: Feature Extraction**

### **Step 2: Descriptors**

$$L(x, y, \sigma) = G(x, y, \sigma) * I(x, y)$$

$$m(x, y) = \sqrt{(L(x+1, y) - L(x-1, y))^2 + (L(x, y+1) - L(x, y-1))^2}$$

$$\theta(x, y) = \arctan((L(x, y+1) - L(x, y-1)) / (L(x+1, y) - L(x-1, y)))$$

### **Step 3: Feature Matching**