

# Precision/Recall clearly explained!





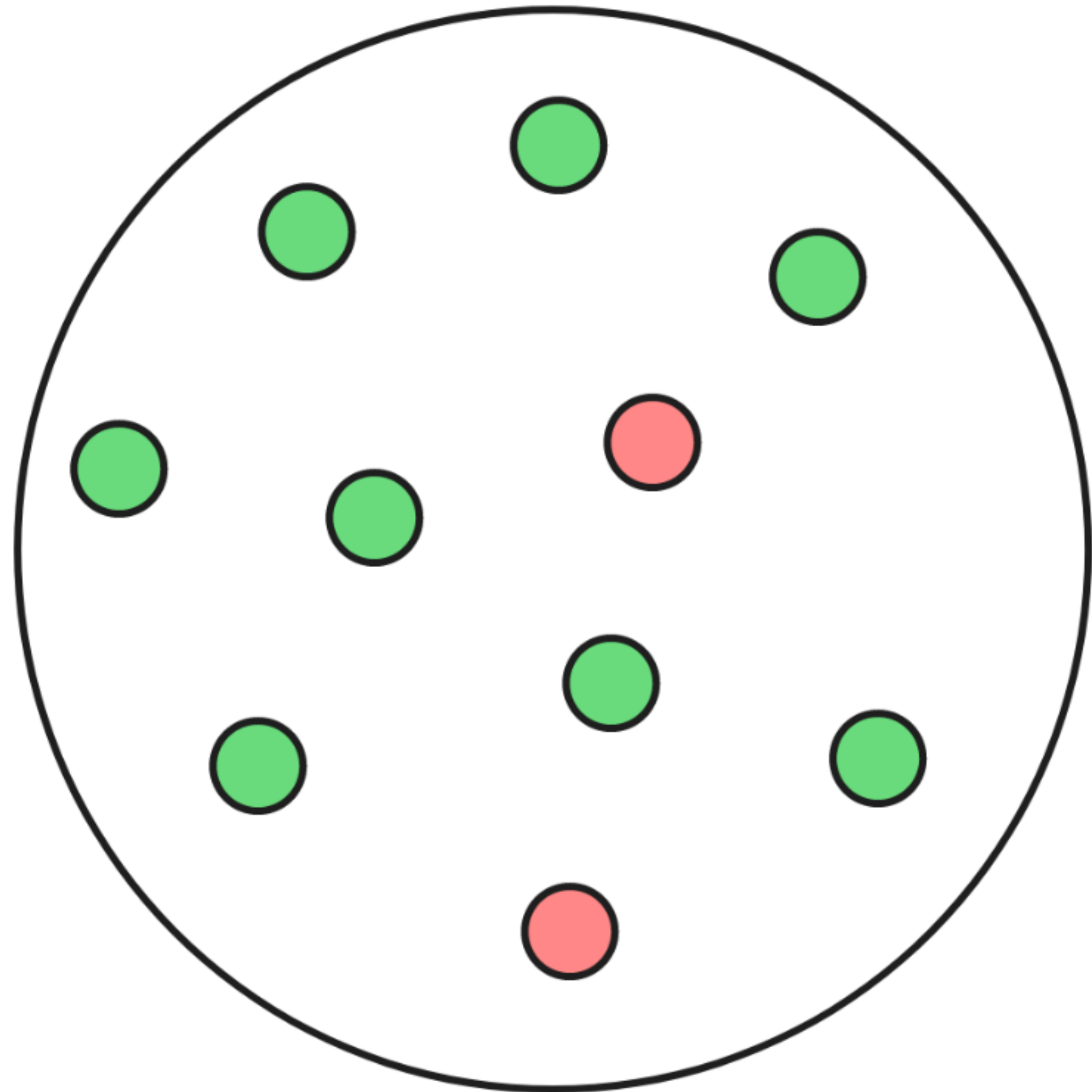
		Reality	
		Guilty	Innocent
Detective's predictions	Guilty	TP	FP
	Innocent	FN	TN



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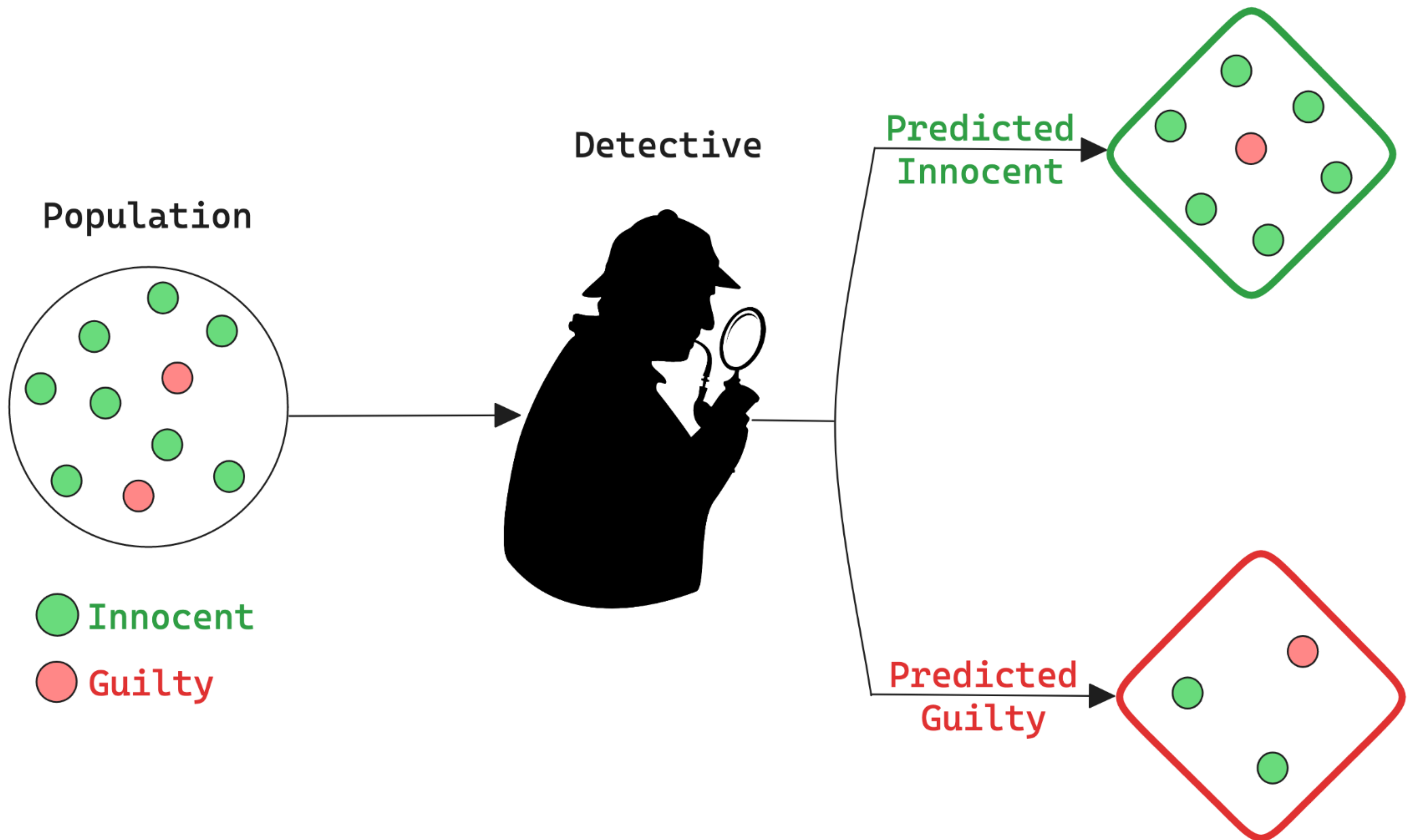
# Population

-  Innocent
-  Guilty

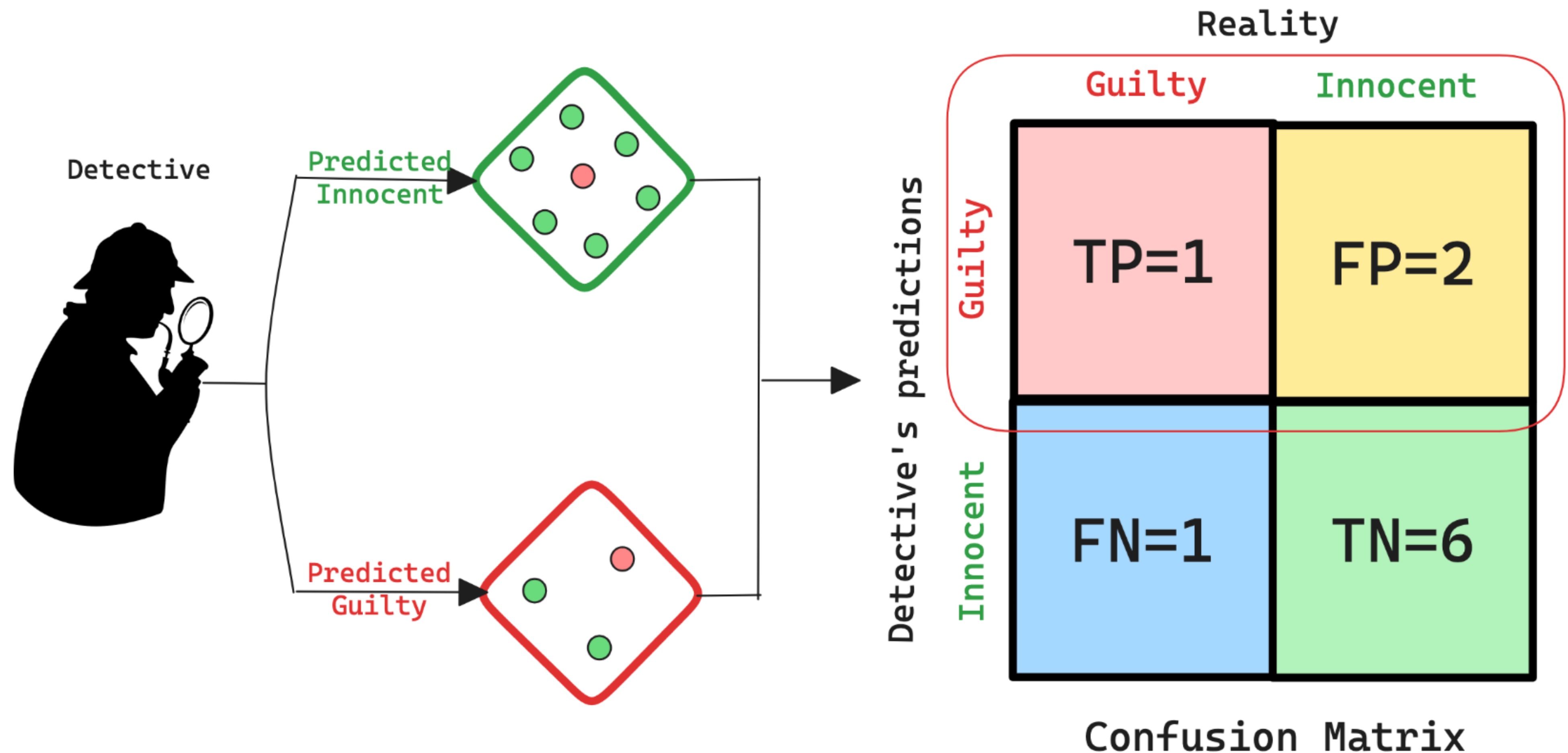


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# Detectives's Investigation



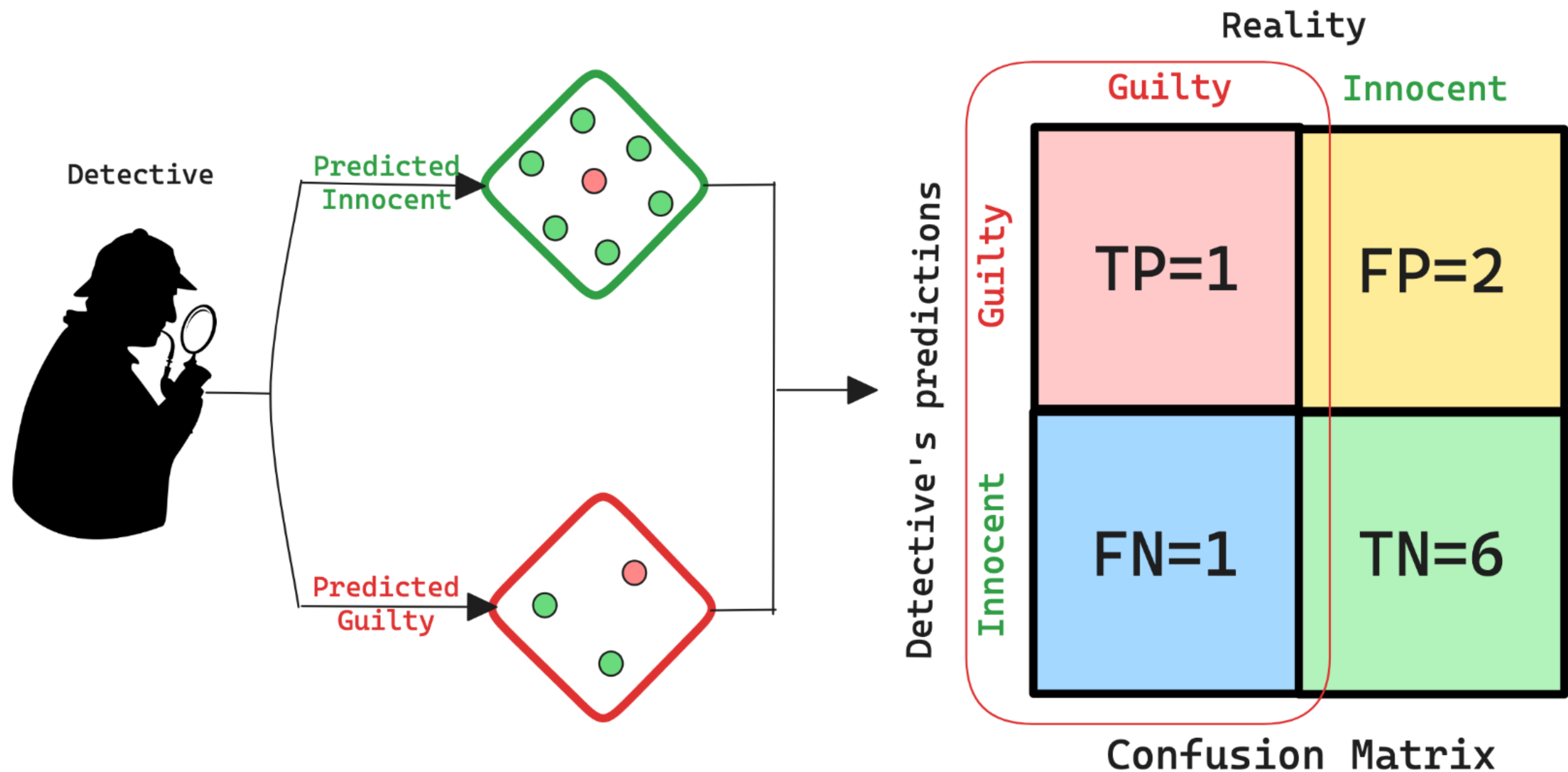
# Precision



- Our detective accused 3 but only 1 is truly guilty.
- True Positives are 1. (TP: guilty accused guilty)
- False Positives are 2. (FP: innocent accused as guilty)
- Precision is  $TP / (TP+FP) = 1 / (1+2) = 0.33$ . 🕵️

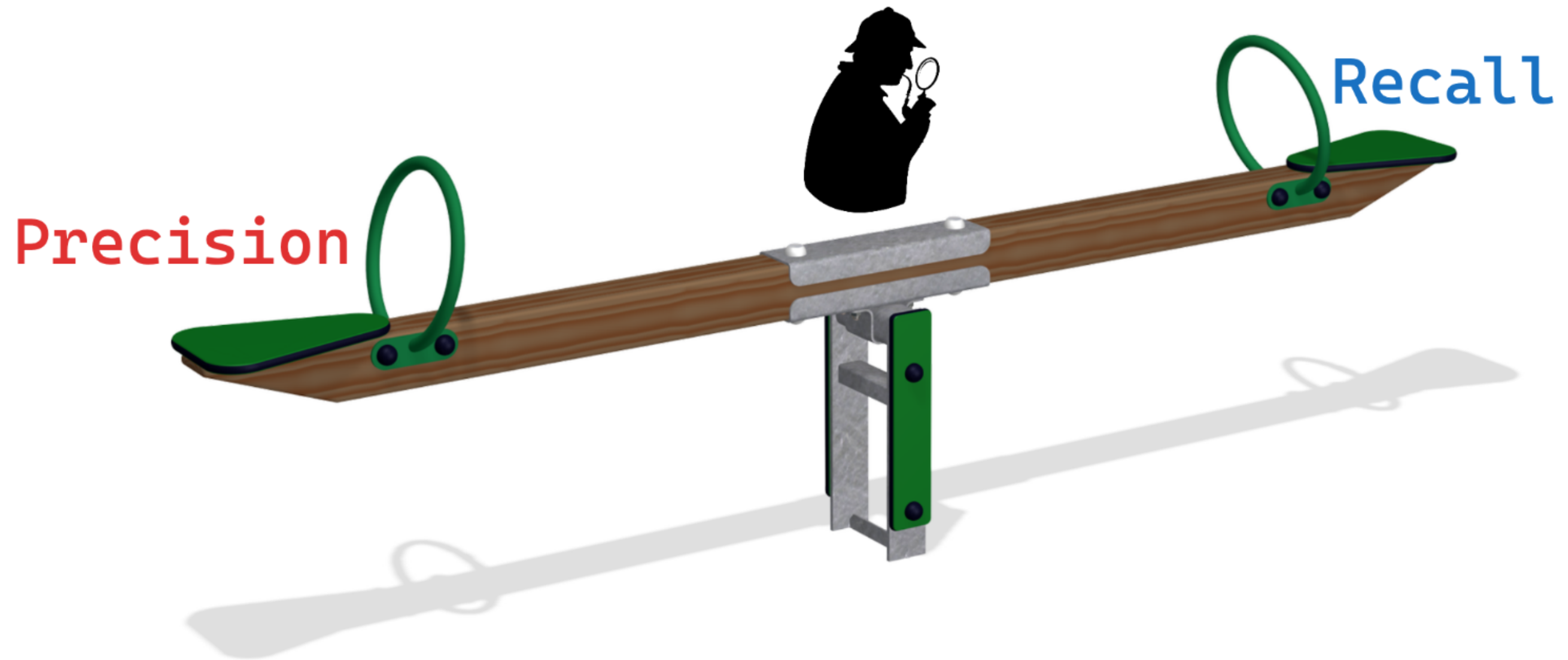


# Recall



- Our detective was able to find only 1/2 guilty parties
- True Positives are 1. (TP: guilty accused guilty)
- False Negatives are 1. (FN: guilty but not accused)
- Recall is  $TP / (TP + FN) = 1 / (1 + 1) = 0.50$  🕵️

# Striking a balance



Let's consider two scenarios:

1. In a small, peaceful town, false accusations might cause social unrest, so the detective may aim for higher Precision.
2. In a crime-ridden city, catching all criminals is crucial, favouring higher Recall.

# Thank You! 🎉

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