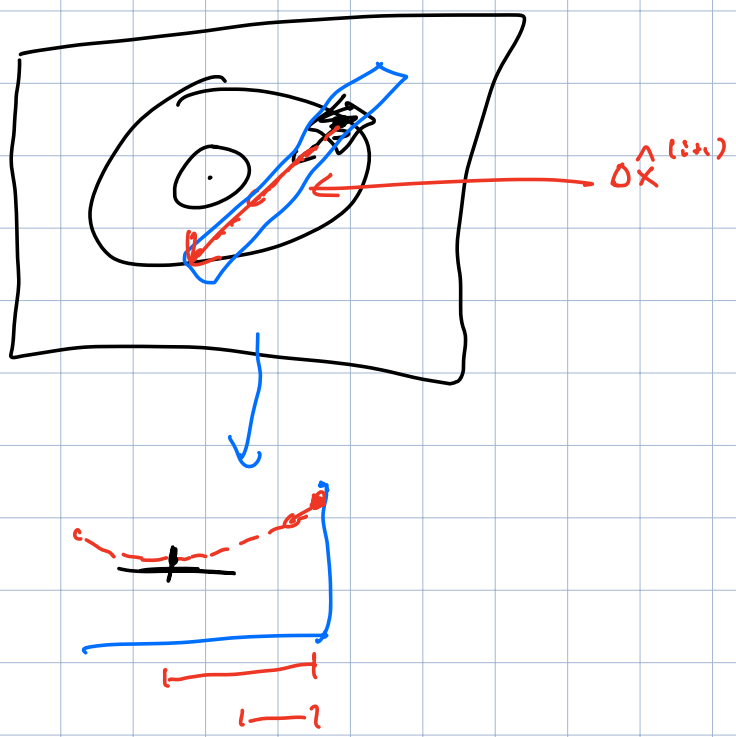

$$\vec{y} = \vec{g}(\vec{x}) + \vec{r}$$

$$\approx \vec{g}(\hat{\vec{x}}^{(i)}) + G_x(\hat{\vec{x}}^{(i)})(\vec{x} - \hat{\vec{x}}^{(i)}) + \vec{r}$$

GN

$$\hat{J}_{WLS}(\vec{x}) = (\vec{y} - \vec{g}(\hat{\vec{x}}^{(i)}) - G_x(\hat{\vec{x}}^{(i)}))^T R^{-1} (\quad \cdot \quad)$$

sol $\rightarrow \hat{\vec{x}}^{(i+1)}$

LM: $\rightarrow$

$$\hat{J}_{RLS}(\vec{x}) = (\vec{y} - \vec{g}(\hat{\vec{x}}^{(i)}) - G_x(\hat{\vec{x}}^{(i)}))^T R^{-1} (\quad \cdot \quad) + \lambda \cdot (\vec{x} - \hat{\vec{x}}^{(i)})^T (\vec{x} - \hat{\vec{x}}^{(i)})$$