PnP-Flow

- Pre-trained flow-matching velocity v^θ
- Datafit function F
- Learning rates $(\gamma_t)_{t\in[0,1]}$

$t = 0$

While $t < 1$:

Gradient step on the datafit

$$z_t = x_t - \gamma_t \nabla F(x_t)$$

Reprojection onto the path

$$\tilde{z}_t = t z_t + (1-t)\epsilon,\ \epsilon \sim \mathcal{N}(0, I)$$

Denoising

$$x_t \leftarrow \tilde{z}_t + (1-t) v_t^\theta(\tilde{z}_t)$$

$t \leftarrow t + \Delta_t$

Return x_1