22-S1-Q3

Q (a) different?

Solution

	one stage	two stage
speed	fast	slower
accuracy	less accurate	more accurate
stage	without proposal stage	have a proposal stage
for real-time application	suitable	less suitable

(b)

vide → video frame → spatial stream →
→ optical flow → temporal stream →
score → prediction
Fusion
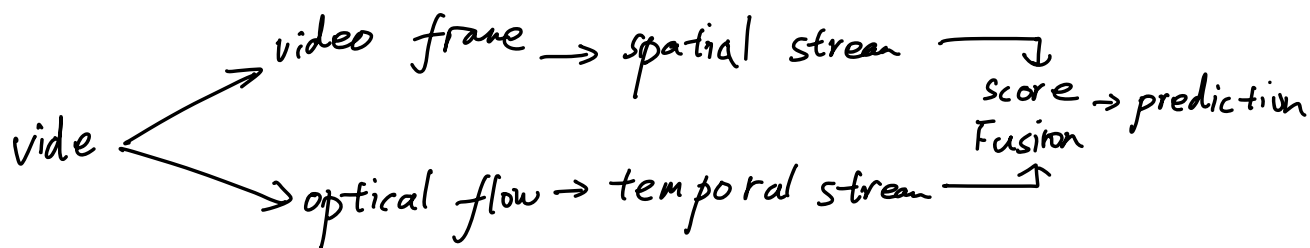
(c) EE6222 topic 14-15 → P 85

① Cross-correlation using small windows

adv: 1. simplicity and efficiency

    2. dense disparity maps

    3. noise averaging

② Feature matching (symbolic and interest operators)

adv: 1. Robustness to variations

    2. accurate matching in textureless regions

    3. computational efficiency for spares Data

(d) $I(x+\delta x, y+\delta y, t+\delta t) = I(x, y, t)$

$$= I(x, y, t) + I_x \delta x + I_y \delta y + I_t \delta t$$

So $\quad I_x \delta x + I_y \delta y + I_t \delta t = 0$