

$$\begin{aligned}
L_i(t) = & \underbrace{w_1 \int_{\Delta t} \frac{\text{Fuel}}{v_i(t)}}_{\text{fuel consumption}} + \underbrace{w_2 R_{\text{error}}^2 + w_6 R_{\text{error}}'^2}_{\text{distance}} + \underbrace{w_3 (v_{i-1}(t+1) - v_i(t+1))^2}_{\Delta v \text{ between car}_{i-1} \text{ and car}_i} + \underbrace{w_4 a_i^2(t)}_{\text{acceleration}} + \underbrace{w_5 (v_{i+1}(t+1) - v_i(t+1))^2}_{\Delta v \text{ between car}_i \text{ and car}_{i+1}}
\end{aligned}$$