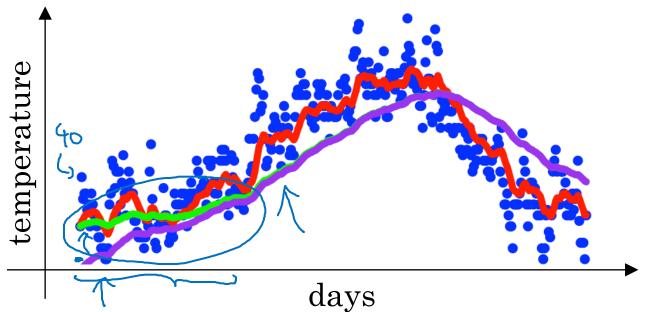


Optimization Algorithms

Bias correction in exponentially weighted average

Bias correction



$$\frac{1}{1-\beta^{t}}$$

$$t=2: 1-\beta^{t} = 1-(0.98)^{2} = 0.0396$$

$$\frac{1}{0.0396} = 0.0396$$

B = 0.08

Andrew Ng

 $v_t = \beta v_{t-1} + (1 - \beta)\theta_t$ $v_0 = 0$ $v_1 = 0.98 v_0 + 0.02 \Theta_1$ $v_2 = 0.98 v_1 + 0.02 \Theta_2$ $v_3 = 0.98 v_0 + 0.02 \Theta_2$ $v_4 = 0.02 \Theta_2$ $v_5 = 0.98 v_5 + 0.02 \Theta_2$ $v_6 = 0.98 v_6 + 0.02 \Theta_2$