Introduction to ML strategy

Orthogonalization

deeplearning.ai

TV tuning example

Car

$0.1 \times$

$+ 0.3 \times$

$- 1.7 \times$

$+ 0.8 \times$

$+ \ldots$
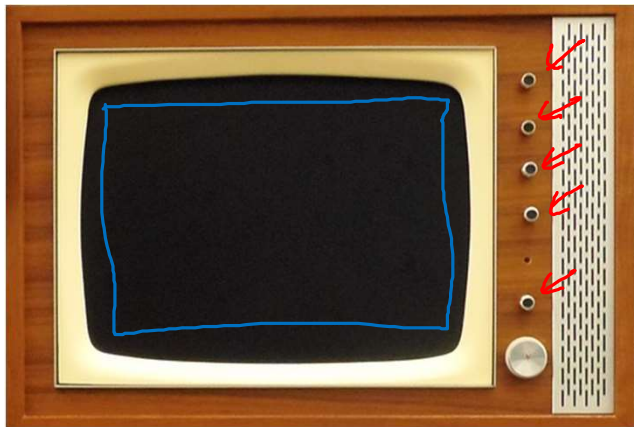
Orthogonalization
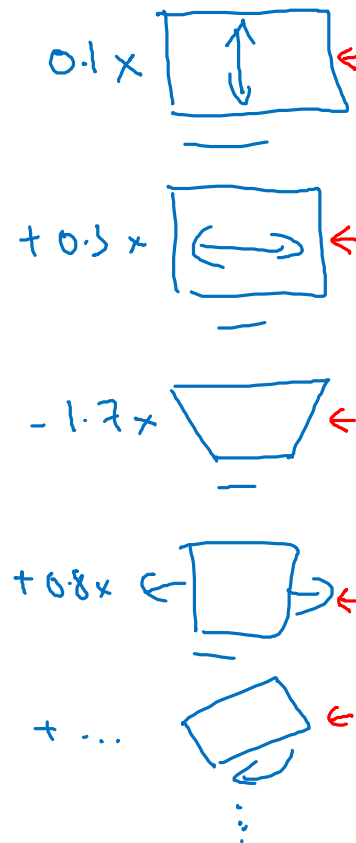
$\rightarrow$ Steering

$\rightarrow \{$ Accelerator
Braking

$\rightarrow \quad 0.3 \times$ angle $\quad - \quad 0.8$ speed

$\rightarrow \quad 2 \times$ angle $\quad + \quad 0.9$ speed.

speed

angle

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Chain of assumptions in ML

→ Fit training set well on cost function

(≈ human-level performance)

bigger network
Adam
...

early stopping

↓

→ Fit dev set well on cost function

Regularization
Bigger trng set

↓

→ Fit test set well on cost function

Bigger dev set

↓

→ Performs well in real world

(Happy cat pic app users.)

Change dev set or cost function

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