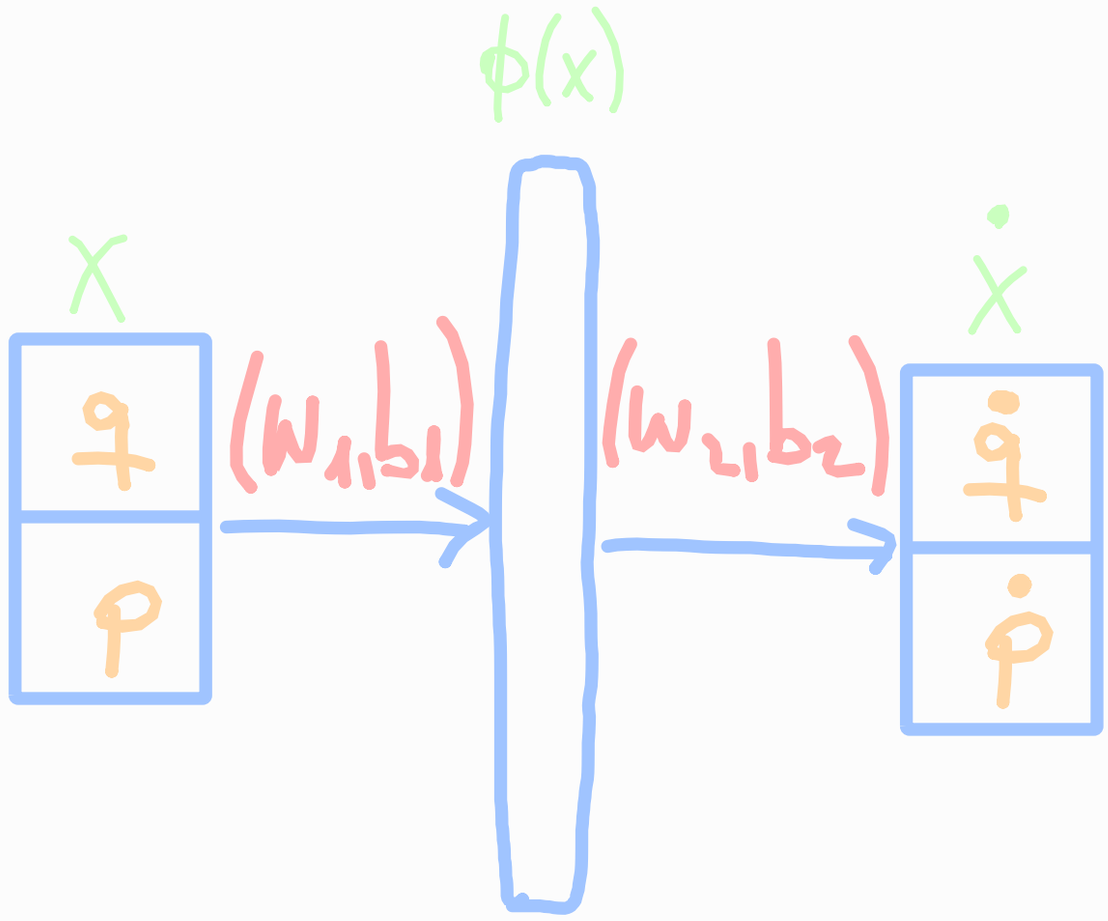
Random ODE-Net (R-MLP)



- Sample (W_1, b_1)
- Solve $(W_2, b_2) = \underset{W,b}{\operatorname{argmin}} \left\| A \cdot \begin{pmatrix} W \\ b \end{pmatrix} - y \right\|$

where $A = \begin{bmatrix} \phi(x) & 1 \end{bmatrix}$, $y = \begin{bmatrix} \dot{x} \end{bmatrix}$

$\Longrightarrow$ approximates $\dot{x} = [\dot{q} \;\; \dot{p}]^T$