$$y\_pred = X \cdot l1\_weight + l1\_bias$$
$$y\_pred = \frac{y\_pred - bn1\_running\_mean}{\sqrt{bn1\_running\_var + 1e^{-5}}}$$
$$y\_pred = bn1\_weight \cdot y\_pred + bn1\_bias$$
$$y\_pred = relu(y\_pred)$$

$$y\_pred = y\_pred \cdot l2\_weight + l2\_bias$$
$$y\_pred = \frac{y\_pred - bn2\_running\_mean}{\sqrt{bn2\_running\_var + 1e^{-5}}}$$
$$y\_pred = bn2\_weight \cdot y\_pred + bn2\_bias$$
$$y\_pred = relu(y\_pred)$$

$$y\_pred = y\_pred \cdot l3\_weight + l3\_bias$$
$$y\_pred = \arg\max(y\_pred)$$