Normalizing Flows Implementation
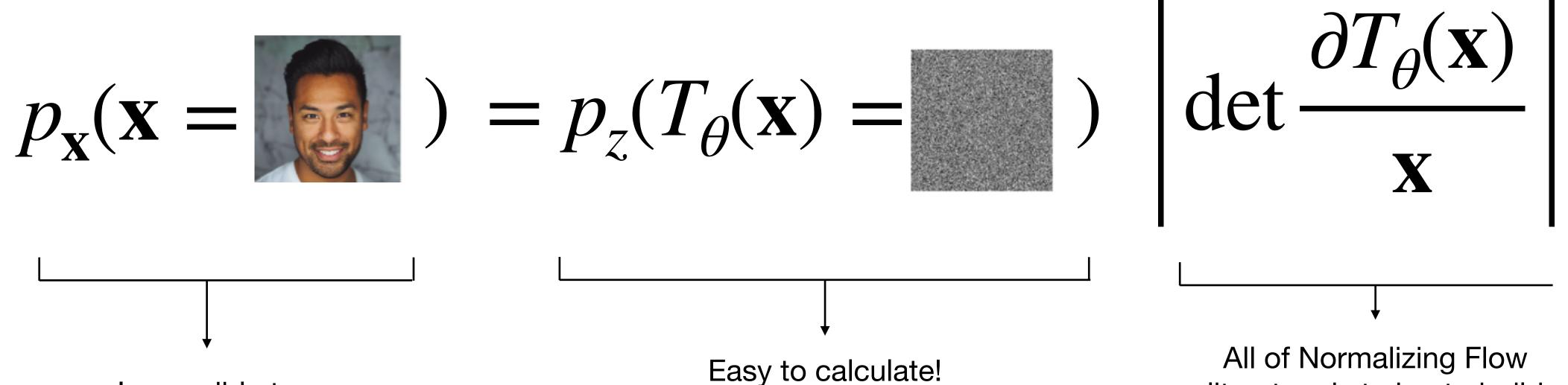
Training Normalizing Flows

Density evaluation and training is based on change of variable formula

$$p_{\mathbf{x}}(\mathbf{x} = \;\;) = p_z(T_\theta(\mathbf{x}) = \;\;) \left| \det \frac{\partial T_\theta(\mathbf{x})}{\mathbf{x}} \right|$$

Impossible to calculate!

Easy to calculate!
=> log likelihood
related to $\|f_\theta(x)\|_2$

All of Normalizing Flow literature is trying to build f_θ such that this is tractable to calculate.

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