Motivation / Objective
• Humans understand each object category in relation to others, focusing on their **commonalities and difference**.

Our Solution – Taxonomy-Regularized CNN
Implement **generalization/specialization** processes as additional **regularization layers** to leverage class structure
• Can be applied to any types of CNNs
• With small overhead:
  < 3% increase in memory, < 15% increase in training time

Architecture
• CNNs regularized by given (or constructed) **taxonomy \( \mathcal{Y} \)**

Quantitative Result
• **Classification results on CIFAR-100 dataset**

Qualitative Result
• **Predictions for CIFAR-100 / Places-205**

Can we construct a CNN that generalizes / specializes?