# Motivation

## Problem Definition

Combine both overfitted representation and generalized representation
to enable part-level editing

## Key Technical Contribution

How to blend the weights between both representation
for part-level editing.

# Method - Generalizable Shape Representation

Let’s define some symbols :)

A shape $S := \{P_1, \ldots, P_n\}$

A part $P_i := (C_i, g_i)$

- The cuboid $C_i := (v_i, e_i, o_i)$ - **position**, **scale**, and **rotation**.
- The geometric latent vector $g_i := h_\psi(r_1^i, r_2^i, \ldots, r_m^i)$ where $h_\psi$ is PointNet

$n$ - number of parts

$m$ - number of points sampled per each part