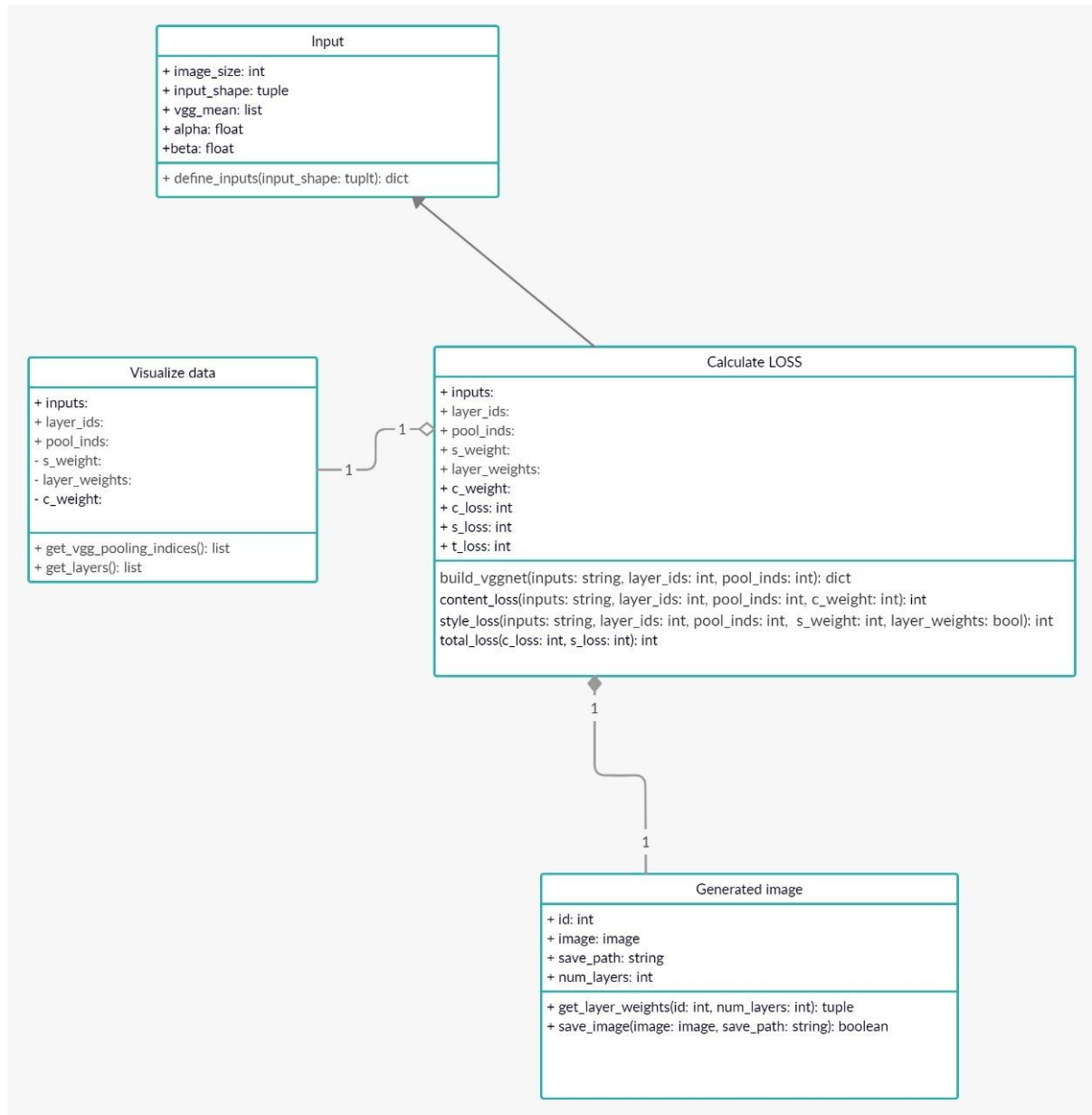# Group 14 – Neural Style Transfer

18103054 – Aseem, 18103115 – Kunal, 18103119 – Khushansh

UML Class Diagram

Input

+ image_size: int
+ input_shape: tuple
+ vgg_mean: list
+ alpha: float
+beta: float
+ define_inputs(input_shape: tuplt): dict

Visualize data

+ inputs:
+ layer_ids:
+ pool_inds:
- s_weight:
- layer_weights:
- c_weight:
+ get_vgg_pooling_indices(): list
+ get_layers(): list

Calculate LOSS

+ inputs:
+ layer_ids:
+ pool_inds:
+ s_weight:
+ layer_weights:
+ c_weight:
+ c_loss: int
+ s_loss: int
+ t_loss: int
build_vggnet(inputs: string, layer_ids: int, pool_inds: int): dict
content_loss(inputs: string, layer_ids: int, pool_inds: int, c_weight: int): int
style_loss(inputs: string, layer_ids: int, pool_inds: int, s_weight: int, layer_weights: bool): int
total_loss(c_loss: int, s_loss: int): int

Generated image

+ id: int
+ image: image
+ save_path: string
+ num_layers: int
+ get_layer_weights(id: int, num_layers: int): tuple
+ save_image(image: image, save_path: string): boolean

UML Use Case Diagram