

## ABSTRACT

The present disclosure relates to the technical field of three-dimensional point cloud. Disclosed are a three-dimensional point cloud processing model training method and a semantic segmentation model training method, and a related device. The three-dimensional point cloud processing model training method comprises : processing three-dimensional point cloud data by using a three-dimensional point cloud processing model, so as to acquire information of points in the three-dimensional point cloud data; acquiring information of pixels in two-dimensional image data, wherein the two-dimensional image data and the three-dimensional point cloud data cover the same area; determining an alignment constraint loss of the three-dimensional point cloud data and the two-dimensional image data by using the information of the points and the information of the pixels; determining a classification loss of the three-dimensional point cloud processing model by using classification information, which is predicted by the three-dimensional point cloud processing model, of the points in the three-dimensional point cloud data and pre-marked scene classification information; and training the three-dimensional point cloud processing model by using the alignment constraint loss and the classification loss.