**List of PCL APIs used in this workshop presentation**

* **Reading/Writng PCD file**
* **API:** [**pcl::io namespace**](http://docs.pointclouds.org/trunk/namespacepcl_1_1io.html)
* **Visualization**
* **API:** [**pcl::visualization::CloudViewer**](http://docs.pointclouds.org/trunk/classpcl_1_1visualization_1_1_cloud_viewer.html)
* Concatinating two clouds
* **API**: [pcl::concatenateFields()](http://docs.pointclouds.org/trunk/group__common.html#gac6add803f86fd16a998dce541e9ef402)
* Matrix transformations
* **API**: [pcl::transformPointCloud()](http://docs.pointclouds.org/trunk/namespacepcl.html#aefbe4956d1c8fb785a97df6708d57c56)
* Extract Indices
* **API**: [pcl::PointIndices](http://docs.pointclouds.org/trunk/structpcl_1_1_point_indices.html)[pcl::ExtractIndices](http://docs.pointclouds.org/trunk/classpcl_1_1_extract_indices.html)
* Removing NaNs
* **API**: [pcl::removeNaNFromPointCloud()](http://docs.pointclouds.org/trunk/group__filters.html#gac463283a9e9c18a66d3d29b28a575064)
* Centroid computation
* **API**: [pcl::compute3DCetroid()](http://docs.pointclouds.org/trunk/namespacepcl.html#a23daec3829d2d4100a2f185372b3753a)
* Normal Estimation
* **API**: [pcl::NormalEstimation](http://docs.pointclouds.org/trunk/classpcl_1_1_normal_estimation.html)
* kd-tree
* **API**: [pcl::search::KdTree](http://docs.pointclouds.org/trunk/classpcl_1_1search_1_1_kd_tree.html)[pcl::KdTreeFLANN](http://docs.pointclouds.org/trunk/classpcl_1_1_kd_tree_f_l_a_n_n.html)
* oc-tree
* **API**: [pcl::search::Octree](http://docs.pointclouds.org/trunk/classpcl_1_1search_1_1_octree.html)[pcl::octree::OctreePointCloudSearch](http://docs.pointclouds.org/trunk/classpcl_1_1octree_1_1_octree_point_cloud_search.html)
* Copressing/Decompressing
* **API**: [pcl::io::OctreePointCloudCompression](http://docs.pointclouds.org/trunk/classpcl_1_1io_1_1_octree_point_cloud_compression.html)
* PassThrough Filter
* **API**: [pcl::PassThrough](http://docs.pointclouds.org/trunk/classpcl_1_1_pass_through.html)
* Raduis based Outlier Removal Filter
* **API**: [pcl::RadiusOutlierRemoval](http://docs.pointclouds.org/trunk/classpcl_1_1_radius_outlier_removal.html)
* Statistical Outlier Removal Filter
* **API**: [pcl::StatisticalOutlierRemoval](http://docs.pointclouds.org/trunk/classpcl_1_1_statistical_outlier_removal.html)
* Downsampling – voxel grid
* **API**: [pcl::VoxelGrid](http://docs.pointclouds.org/trunk/classpcl_1_1_voxel_grid.html)
* ICP
* **API**: [pcl::IterativeClosestPoint](http://docs.pointclouds.org/trunk/classpcl_1_1_iterative_closest_point.html) [pcl::IterativeClosestPointWithNormals](http://docs.pointclouds.org/trunk/classpcl_1_1_iterative_closest_point_with_normals.html)[pcl::IterativeClosestPointNonLinear](http://docs.pointclouds.org/trunk/classpcl_1_1_iterative_closest_point_non_linear.html) [pcl::JointIterativeClosestPoint](http://docs.pointclouds.org/trunk/classpcl_1_1_joint_iterative_closest_point.html)[pcl::NormalDistributionsTransform](http://docs.pointclouds.org/trunk/classpcl_1_1_normal_distributions_transform.html)
* RANSAC
* **API**: [pcl::RandomSampleConsensus](http://docs.pointclouds.org/trunk/classpcl_1_1_random_sample_consensus.html)
* Object Segmentation Database – Link: [OSD](http://www.acin.tuwien.ac.at/?id=289)
* Euclidean Cluster Extraction
* **API**: [pcl::EuclideanClusterExtraction](http://docs.pointclouds.org/trunk/classpcl_1_1_euclidean_cluster_extraction.html)
* Region growing
* **API**: [pcl::RegionGrowing](http://docs.pointclouds.org/trunk/classpcl_1_1_region_growing.html)
* Color based Region Growing
* **API**: [pcl::RegionGrowingRGB](http://docs.pointclouds.org/trunk/classpcl_1_1_region_growing_r_g_b.html)
* Concave hull
* **API**: [pcl::ConcaveHull](http://docs.pointclouds.org/trunk/classpcl_1_1_concave_hull.html)
* Convex hull
* **API**: [pcl::ConvexHull](http://docs.pointclouds.org/trunk/classpcl_1_1_convex_hull.html)
* PFH Estimation
* **API**: [pcl::PFHEstimation](http://docs.pointclouds.org/trunk/classpcl_1_1_p_f_h_estimation.html)
* FPFH Estimation
* **API**: [pcl::FPFHEstimation](http://docs.pointclouds.org/trunk/classpcl_1_1_f_p_f_h_estimation.html)
* VFH Estimation
* **API**: [pcl::VFHEstimation](http://docs.pointclouds.org/trunk/classpcl_1_1_v_f_h_estimation.html)
* CVFH Estimation
* **API**: [pcl::CVFHEstimation](http://docs.pointclouds.org/trunk/classpcl_1_1_c_v_f_h_estimation.html)