# **3D POINT CLOUD CLASSIFICATION**

# **USING DEEP LEARNING**

***DEPARTMENT OF CSE***

***BATCH – 14***

***NAME OF THE STUDENTS***

JENNISHA CHRISTINA MARTIN [REGISTERNO: 211417104097]

SIVASANKARI R[REGISTERNO: 211417104261]

SAKTHI R V [REGISTERNO: 211417104231]

*NAME OF THE GUIDE*

MRS. SANGEETHA KALYANARAMAN , M.E..,

ASSOCIATE PROFESSOR

ABSTRACT

In the last few years, the availability of 3D content is still less than 2D counterpart. Hence many 2D-to-3D image conversion methods have been proposed. Methods involving human operators have been most successful but also time- consuming and costly. Automatic methods, that make use of a deterministic 3D scene model, have not yet achieved the same level of quality for they rely on assumptions that are often violated in practice. Here two types of methods are developed. The first is based on learning a point mapping from local image/ attributes, such as color, spatial position. The second method is based on globally estimating the entire depth map of a query image directly from a repository of 3D images (image + depth pairs or stereo pairs) using a nearest-neighbor regression type idea. It demonstrates the ability and the computational efficiency of the methods on numerous 2D images and discusses their drawbacks and benefits. This learning has lately attracted increasing attention due to its wide applications in many areas, such as computer vision, autonomous driving, and robotics. As a dominating technique in AI, deep learning has been successfully used to solve various 2D vision problems. However, deep learning is still in its infancy due to the unique challenges faced by the processing with deep neural networks. Recently, deep learning has become even thriving, with numerous methods being proposed to address different problems in this area.