Computer vision to detect defects in 3D Printed parts

3D printing is important due to its design flexibility, rapid prototyping capabilities, customization potential, and the ability to manufacture complex parts. It offers on-demand production, supply chain optimization, sustainability benefits, and enhances educational and research opportunities.

- **Benefits- This project will help in the early detection of defect and will save cost and wastage, which will be beneficial to the company. It will increase quality control and efficiency.**
- **Objective- Do the feature extraction to detect defects and then classify the defects.**
- Libraries- PCL, OpenCV, TensorFlow, Numpy, Scikit

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Project Timeline week wise

- This Project can be completed by dividing in 7 weeks.
- Feature extraction can be done using PCL library, blob detect, Corner and edge detection
- Algorithm used for Detection can be CNN, pre trained models like- VGG16, mobileNet.