Q1)

The loaded point cloud data has a shape of 64×64×64, which differs from the expected 64×4096 matrix. To proceed with the convolution, we need to reshape or select a subset of this data to match the expected dimensions.

Here is the code for

A screen shot of a computer code

Description automatically generated

A screen shot of a computer program

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For 64 out channels:

A screenshot of a computer

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For 128 out channels:

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For 256 out channels:

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For 512 out channels:

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Q2)

Detail see in code: sparse

A computer screen shot of a code

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A computer screen shot of text

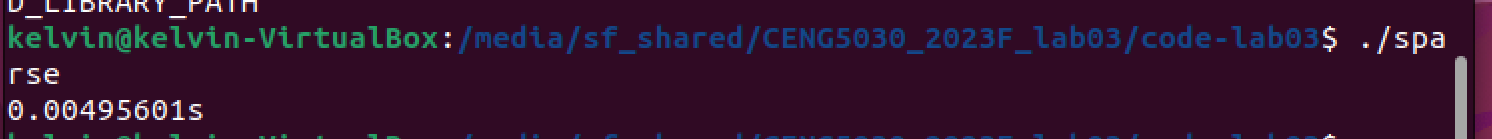
Description automatically generated

A screenshot of a computer code

Description automatically generated

A screen shot of a computer program

Description automatically generated

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