

Text-to-CAD

Prompt

Create a detailed sketch of an eight-pointed star featuring gracefully curved side arcs, uniform sharp tips, and a flat bottom edge.

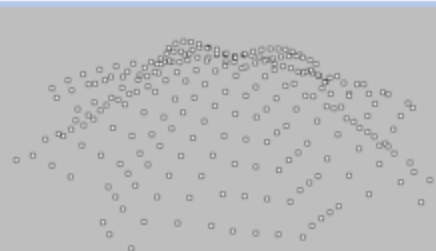
Sketch-to-CAD



Image-to-CAD



Reconstruction/Editing



Requirement

Input

Encoder

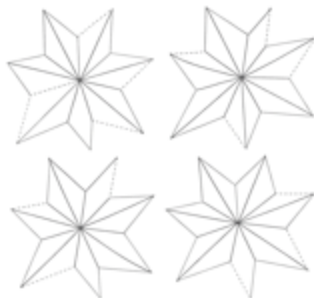
Decoder

Validation

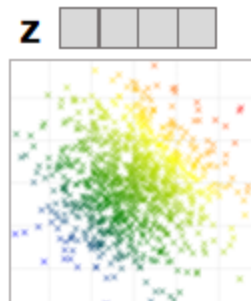
Output



Object definition



Raw data



Latent space



- ✓ Geometric Validation
- ✓ Functional Validation
- ✓ Constraint Check
- ✓ Quality Standards

Real design test



Sketch Generation

construction sequence

Vertex V1 = (x1, y1, z1)
Vertex V2 = (x2, y2, z2)
.....
Curve2D C0: NURBS, Degree=?,
Knots=?, Poles=?, Weights=?,
domain(0, 4.46014).

Mesh



Point cloud



B-rep

surfaces: 17
3d curve: 32
2d curves: 80
vertices: 17
...
curve2d[0]: TL_NurbsCurve ...

CAD Generation