

Indicative list of CAD Projects

S. No.	Title/Description
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| 1 | Find out optimum volume for packing different boxes |
| 2 | Finding partition line/surface for part mouldability problem. |
| 3 | Tessalation of parametric surfaces |
| 4 | Find minimum number of cameras and their location to guard art gallery. |
| 5 | Generate STL file through point cloud data |
| 6 | Repairing of STL file (find and fill missing facets). |
| 7 | Tool path generation for free form surfaces. |
| 8 | Generate part program from a solid model for milling |
| 9 | Part program generation through DXF file. |
| 10 | Extraction of geometric modeling data from STEP file format and write part program |
| 11 | Remove collinear points from approximation of a freeform curve and write CLI file |
| 12 | Writing part program by extracting geometric modeling data from IGES file format |
| 13 | Bezier curve/surface fitting |
| 14 | Extrinsic properties of Bezier curve and surface (length, area, cherecteristics) |
| 15 | Implement interective bezier curve plot |
| 16 | Sub division of a Bezier curve (nth order) |
| 17 | Degree raising/decreasing of Bezier curve |
| 18 | Inverse point solution for bezier curve |
| 19 | Intrinsic properties of bezier curve, tangent, Normal, curvature plot |
| 20 | Inverse point solution for B-spline curve |
| 21 | B Spline curve/surface fitting |
| 22 | B-Spline interpolation on CNC machine and part program |
| 23 | Implement interective b spline curve plot |
| 24 | Intrinsic properties of B-Spline surface, tangent, Normal, curvature plot at any point |
| 25 | Intrinsic properties of Bspline curve, tangent, Normal, curvature plot etc. |
| 26 | Extrinsic properties of B-Spline curve and surface (length, area, cherecteristics) |
| 27 | Sub division of B-Spline (nth order) |
| 28 | Generate NURBS. |
| 29 | Perform Boolean operations on given 2D polygons: Union, Subtraction, Intersection |
| 30 | Simulation of machine linkages and mechanisms using MATLAB |
| 31 | Implement projections |
| 32 | Find and draw the sectional view of the given solid. |
| 33 | Implement the Hidden Line Removal Operation. |
| 34 | Intersection between free form curves. |
| 35 | Geodesic curve/distance between two points on a parametric surface |
| 36 | Minimum Distance between two surfaces |
| 37 | Minimum Distance between a curve and surface |
| 38 | Minimum Distance between a point and surface |