# The Basic Version

These are all run and set at the top of Reconstruction.py

fine

file\_name, epsilon, RBF\_function, l = 'bunny-500.off', 0.05, polyharmonic, -1

mutations and floating shells are visible

file\_name, epsilon, RBF\_function, l = 'bunny-500.off', 0.5, polyharmonic, -1

fine

file\_name, epsilon, RBF\_function, l = 'bunny-500.off', 0.05, biharmonic, -1

mutations and attached shell visible

file\_name, epsilon, RBF\_function, l = 'bunny-500.off', 0.5, biharmonic, -1

A purple bunny with blue dots

Description automatically generated

# Extension: adding a global polynomial

# Extension: Centre Reduction

q3.py is the script that executes code for the figures below

This is a bunny that uses 10% random points and then gets another 5% added for a total of 15% of the original 500 points

A purple bunny with blue dots

Description automatically generatedA purple bunny with blue dots

Description automatically generated

Here is a dragon-3000 with a similar treatment, this time floating islands are present and the detail suffers greatly

A purple polygonal object

Description automatically generated

ChatGPT has been used for individual parts of the coding aspect as a smart documentation to tap into the sparse scipy API.