

Project Report 2 : 3D Shape Search Engine

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October 13, 2015

Introduction

This report details the design and testing of a 3D shape search engine using both Geodesic (GD) and Euclidean distance (ED). The contents of this report will include a description of the code written to generate both GD and ED descriptors, given a 3D shape (mesh) input; a description of how noise and distortion were added to a set of 3D models (TOSCA data set); a description of code generated to facilitate as 3D search-engine back-end and a corresponding GUI front-end for 3D shape retrieval; and an experimental comparison between GD and ED based searches when clean, distorted and incomplete models are presented to the aforementioned search engine. Additionally, a tutorial will be provided as to how to run the search-engine GUI.