3d Cad Model Retrieval Based On Multiple Levels Of Detail
3d Cad Model Retrieval Based

3D shape retrieval may find the existing models as reference for design reuse. 3D segmentation decomposes models into new elements with large granularity and salient shapes to replace the faces in a solid model. In this way, it may reduce the complexity of a CAD model and make a local salient shape more prominent.

3D CAD solid model retrieval based on region segmentation

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3D CAD model retrieval based on GA-ACO - ResearchGate

First (as far as I know) investigation of the use of Capsule Networks for content-based 3d model retrieval. (information retrieval for 3D models) This project was accomplished in just under 4 weeks. I probably used 120 hours of total compute time split between single GPU and 8 GPU aws instances ...

Ryanglambert/3d_model_retriever: Experimenting with a newly published deep learning paper and how it can be used for content-based 3D model retrieval. (info retrieval for CAD) - github.com

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3D CAD solid model retrieval based on region segmentation

Computer-Aided Design & Applications, Vol. 2, No. 6, 2005, pp 717-725 717 A 2D Sketch-Based User Interface for 3D CAD Model Retrieval Jiantao Pu, Kuiyang Lou and Karthik Ramani Purdue University, {pjiantao, kuilou, ramani}@purdue.edu ABSTRACT This paper describes a sketch user interface enhanced by feedback for 3D CAD model retrieval.

A 2D Sketch-Based User Interface for 3D CAD Model Retrieval

3D CAD Model Retrieval Based on Multiple Levels of Detail Jiantao Pu Subramaniam Jayanti Suyu Hou Karthik Ramani* PRECISE, School of Mechanical Engineering, Purdue University, U.S.A. Abstract This paper describes a new 3D model retrieval approach, which represents a 3D shape at three

3D CAD Model Retrieval Based on Multiple Levels of Detail

Introduction to 2D drawing/3D-CAD model retrieval system [Overview] To rapidly develop and present competitive products to the market in the manufacturing area, it is necessary to effectively utilize the cumulative technical materials such as design scheme of the existing products.

Introduction to 2D drawing/3D-CAD model retrieval system

rough sketches and accurate 3D models, sketch-based 3D model retrieval remains one of most challenging research topics in the field of 3D model retrieval. In order to bridge the gap, we propose a 3D sketching solution and develop a sketch-based 3D model retrieval system that uses human 3D sketches, which is described in detail in the following ...

3D Sketch-Based 3D Model Retrieval - userweb.cs.txstate.edu

Keywords: Design reuse, 3D CAD model, Model retrieval Abstract. With respect to the requirement of precise and intelligent design reuse in product digital design, this paper proposes a novel 3D model retrieval method for product design reuse, the method use the design feature as the carriers to organize the geometric and design feature information.

A Design Reuse Method of 3D CAD Model Based on Retrieval

The performance of the proposed method is evaluated in terms of accuracy on both 3D model classification and retrieval. The datasets used for the evaluation are the publicly available Princeton
ModelNet 3D CAD model dataset, and the ShapeNet Core55 subset of the ShapeNet dataset. These datasets are designed for machine learning algorithms.

Ensemble of PANORAMA-based convolutional neural networks for 3D model classification and retrieval - ScienceDirect
Shape density-based approaches have been extensively studied for 3D model matching due to its simplicity and explicit geometry descriptions. While most studies are concerned with either the matching capabilities or the theoretical aspects of the algorithms, this study experimentally investigates the descriptors' affine transformation invariance and noise robustness, as well as bin size effect.

Matching of 3D CAD models with density-based approaches: An experimental evaluation of the invariance, bin size and noise robustness - ScienceDirect
model retrieval. A novel representation of 3D CAD models using hierarchical graph (HG) is proposed. HG contains topology relationship and the shape feature information in high-level. In this way, coarse-grained and fine-grained 3D CAD model retrieval is implemented. On this basis, a 3D model retrieval method is proposed based

3D CAD Model Representation and Retrieval Based on Hierarchical Graph - IJSOFTWARE
Secure CAD Model Retrieval and Data Consistency: Issues in Role-based Visualization - sharing 3D CAD models to downstream collaborators, ... Role-based collaborative 3D model protection is a recent research topic. One pilot research was done by Cera et al. [1]. They proposed a co-modeling mechanism for concurrent designers.

Secure CAD Model Retrieval and Data Consistency: Issues in Role-based Visualization - cad-journal.net
Abstract. A retrieval method for 3D CAD models based on the softassign quadratic assignment algorithm is presented in this paper. Firstly, retrieval models and target models are expressed as face adjacency graphs (FAGs) and thus 3D CAD model retrieval is turned to a graph matching problem.

3D CAD model retrieval based on the softassign quadratic assignment algorithm - SpringerLink
A large number of 3D models are created and available on the Web, since more and more 3D modelling and digitizing tools are developed for ever increasing applications. The techniques for content-based 3D model retrieval then become necessary. In this paper, a visual similarity-based 3D model retrieval system is proposed.

On Visual Similarity Based 3D Model Retrieval
The techniques for content-based 3D model retrieval then become necessary. In this paper, a visual similarity-based 3D model retrieval system is proposed. This approach measures the similarity among 3D models by visual similarity, and the main idea is that if two 3D models are similar, they also look similar from all viewing angles.

On Visual Similarity Based 3D Model Retrieval - Chen - 2003 - Computer Graphics Forum - Wiley Online Library
content-based retrieval only returns the related 3D models, making it difficult for the user to get the features' semantic knowledge related to the CAD model from the retrieval result. At present, lots of scholars have begun doing many researches [2.3.4] in semantic retrieval on 3D model, but there are few researches on 3D CAD model.

Three-dimensional CAD Model Retrieval Algorithm Based on Ontology - COnnecting REpositories
ing [21] for 3D model retrieval. Most of the above 3D model representation methods are borrowed from traditional 2D feature, such as BF-DSIFT [22] which is an extended SIFT feature with Bag-of-
Features. Therefore, it is important to choose a good representation of line drawing images for sketch-based 3D model retrieval.

**3D Sketch-Based 3D Model Retrieval with Convolutional Neural Network - userweb.cs.txstate.edu**

3D model retrieval and its efficiency has a direct impact on the performance of 3D model retrieval systems. However, it is a very difficult problem, and many well-known institutions and universities in the world are dedicating themselves to this research field. In this paper, we propose a method based on 2D slices to do 3D model retrieval. The ...

**3D Model Retrieval Based on 2D Slice Similarity Measurements - cis.pku.edu.cn**

On Visual Similarity Based 3D Model Retrieval Ming Ouhyoung, Ding-Yun Chen Xiao-Pei Tian Edward Yu-Te Shen Department of Computer Science and Information Engineering National Taiwan University November 18, 2003 2 Outline Introduction Previous works Our proposed approach 3D shape search engine Experimental results Conclusion & future work