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Bachelorarbeit/Masterarbeit

Conceptualization of an Artificial Neural Network for the recognition of features in Open Source furniture designs

Keywords: Artificial Neural Network; literature research; prototype possible; computer science; preferably MA

Sprache: DE/ENG

Abstract: While there are CAPP (compter-aided process planning) systems in use today, they are still heavily reliant on human interaction. However, there is an avid research interest in finding ways to truly automate process planning. One step in creating a fully automated CAPP system is recognizing the features of a part in order to then assign machining operations to these features. One promising approach to automate feature recognition is to use Artificial Neural Networks (ANN) to analyse part designs, e.g. in the STEP format. However, when working with open source designs one might come across different data formats, which is an additional difficulty in our use case. The goal for this thesis is to investigate the possibilities and difficulties as well as the baseline and requirements for developing and training an ANN to recognize features in Open Source furniture designs. A very basic ANN capable of recognizing two to three selected features could possibly be developed, trained and tested (maybe in a separate thesis).

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Datum: 04/12/2022