

The aim of the thesis is to implement a procedural method which transfers a natural image into a pencil drawing-like style. Our project is written in C++. It uses libraries like OpenCV for image processing and Eigen for linear algebra computations. Since neural networks are frequently questioned, as to whether or not they are better than procedural methods for artistic style reproduction, this work presents also a detailed comparison of both of these approaches. We have re-implemented a selected method for procedural generation of pencil drawing style, bringing several modifications. We compare results of the method with a recently released code for neural network-based drawing generation. The result of this subjective comparison indicates that neural networks maybe be better suited for the generation of pencil-like hatching texture to reproduce shading. On the other hand, the procedurally generated outlined produced by the implemented approach provide more natural renderings.