

# A Study of 3D Facial Modeling and Aging with Project Applications in MAYA

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## Abstract

This project studies presents three interrelated topics: 3D facial modeling, facial aging, and GUI design. These three topics are then applied using Maya to complete a 3D facial model and a facial aging GUI based on the study of facial aging completed.

First the Maya modeling system and aspects of 3D modeling are studied. This knowledge is applied to create a 3D subdivision facial model. Next texture maps are studied and created for the facial model using a photorealistic texture painting process. Finally hair is added to the facial model using the Maya Hair System. All aspects of the model are created from the artists' perspective.

In the second half of this project a study of facial aging is completed with a special emphasis on skin aging. The knowledge gained in the facial aging study is then used to create a facial aging GUI. Research is done on the creative processes artists use and how a GUI can be designed to facilitate that creative process. The GUI was created as the front end for a facial aging plugin that would utilize the knowledge gained in this project. The actual facial aging plugin is not part of this project; but could be completed in the future.

