VISUALIZATION
TEXAS A&M UNIVERSITY

Overview of Projects in General

Each project is designed to move your learning experience and skill level forward. Failure to complete or sufficiently explore components of one project will lead to increased difficulty on the succeeding project.

Project Description

This project is designed to setup and establish expectations for the final project. The organization of the work required for this project is similar to a research paper. In this case there will be significant emphasis on both the technical and the artistic exploration and expectations. The project is to be presented in class using presentation software within an eight-minute timeframe.

- Statement of Problem
    - Identify and describe a complex biologically-inspired motion.
    - Explain how this motion functions in the natural world.
    - Relate how this motion has a general application with respect to other animals or non-animal objects that can be given animated performances.
    - Breakdown and order the primary visual aspects of the motion.
    - Identify the critical physical aspects of the motion.
    - Point out the most difficult aspect of implementing an animated representation of this motion using computer graphics.
- Background / Prior Works
    - Locate and illustrate visual representations of the motion from the natural world.
    - Discover, communicate, and cite descriptions of the motion from the worlds of science, mathematics, and engineering.
    - Discover, communicate, and cite descriptions of the motion from the world of computer graphics including uses in scientific visualization, education, and entertainment.
- Methodology
    - Construct a plan for depicting the biologically-inspired motion using computer graphics.
    - Explain the software and programming required.
    - Summarize the approach to the artistry required.
- Expected Results
    - Show examples of the visual goals for the project including shape language, color, texture, lighting, and environments.
    - Estimate and describe the run-time, composition, and editing required.
    - Construct a calendar describing the steps required and dates by which parts of the process will be completed.

Technical Specifications

This project should be turned-in using Filex as both a presentation file and a PDF. The presentation file should be in a common format such as Microsoft PowerPoint, Keynote, Google Slides, or similar. It is important that the presentation format chosen can be utilized in class so if there are concerns they should be investigated beforehand. The PDF should be a direct representation of the presentation.

File names:
- Presentation file: <LastNameFirstName>_Project_3-VIZA_615.<file_extension>
- PDF: <LastNameFirstName>_Project_3-VIZA_615.pdf

How Success is Measured

A grade will be determined based upon the following factors:

- Overall (30%):
    - Correct format
    - Quality of writing
    - Quality of presentation
- Key issues:
    - Statement of Problem (15%)
        - Completes all parts of expectations
        - Significance of the problem
        - Level of complexity
    - Background / Prior Works (20%)
        - Completes all parts of expectations
        - Depth of research
        - Clear communication of relationship between prior works and the problem
    - Methodology (20%)
        - Completes all parts of expectations
        - Logical
        - Fits within capacities of the student
    - Expected Results (15%)
        - Completes all parts of expectations
        - Provides a technically valid solution to the problem
        - Provides a visually valid solution to the problem
        - Quality of visuals