

CSIS 335 Project Proposal

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We would like to make a raytracer to create 3d animations. We will use pthreads to parallelize the rendering of a single frame, and OpenMPI to parallelize the rendering of each frame.

Our minimum expectation is to use this nested parallelization structure to create a tool to render batches of images. With this, we should be able to render something simple, such as a mandelbrot zoom.

Ideally, we use this system to render 3d animations using [ray tracing techniques](#).

Timeline:

November 23 - Finished single threaded, single frame raytracer

November 26 - Finalize design and architecture for full system

(api, command line options, file in/out, source code structure, repo structure, ect...)

November 28 - Multithreaded single frame renderer using pthreads

December 3 - OpenMPI parallel frame rendering

December 5 - Paper drafted & script to turn images to video

December 6 - Start creating presentation

December 9 - Finish Presentation

December 13 - Final Submission