Project topic:

Using TensorFlow, a google open-source package, to do neural style transfer.

-https://www.tensorflow.org/tutorials/generative/style_transfer#top_of_page

Motivation.

The project is about using machine learning skills to transfer a style of one graph to another. Since the class is all about computational photography, I think it will be interesting to use some machine learning to create some new graphs.

Milestones:

1) Learn TensorFlow, and understand its architecture, as well as how to use it.(~5 hours)
2) Follow the existing documentation (~3 hours)
3) implement my own version of neural style transfer(~15 hours)

Evaluation

The result will be image A, with a distinguishable style from image B. Check https://www.tensorflow.org/tutorials/generative/style_transfer#top_of_page, or search Neural Style transfer to get a detailed idea.

Resources

1) Official Google documentation: https://www.tensorflow.org/tutorials/generative/style_transfer#top_of_page
2) Github Opensource: https://github.com/tensorflow

Potential problems:

1) The project has a suggested requirement of hardware, and I am not sure if my machine can successfully complete the task.
2) Since TensorFlow is a mature open-source project, I am not sure how much I can contribute to it (like creating my own code). I think my project will mainly focus on implementation with the existing resources.