

CMPM 202 W2020

Computational Media Research

Final Project

Working in teams of 2 or 3 people, create a computational media research project of your choice.

1. Solidify the team and the main idea of your project by Tuesday of Week 8. Identify related projects or codebases. Explain the computational, interpretive, and media making aspects of your project. How can your work be considered “computational media research”? What do you expect will be the main creative and technical challenges for your project? How will you divvy up the responsibilities?

Some ideas that would be appropriate:

- Train a GAN or another generative algorithm to generate new designs, stories, game levels, and/or media data
- Design a CNN to classify data in creative or unusual ways
- Create a novel style transfer algorithm that learns how to transform input images or other data
- Implement an image segmentation algorithm and then perform some sort of transformation on the identified objects
- Create a super resolution or inpainting algorithm that is able to fill in or hallucinate missing data
- Use reinforcement learning approach to complete a game or other activity
- Extend or customize one of the Magenta projects
- Create a tool that can improvise with you, say by co-sketching a drawing from analyzing your pen inputs, or by performing music with you, or by responding to your movements, your gestures, or your voice

2. Choose one or more articles related to your project idea to present and discuss in class during Week 8. Assign the articles along with a series of thought-provoking questions two days before your presentation (i.e., Sunday if you are presenting on Tuesday, and Tuesday if you are presenting on Thursday). During your presentation, you will succinctly summarize details of the article in ~5 or 10 minutes, and then, as a group, using a slide presentation and leading a short class discussion, explain how the technique or approach described in the papers relates to your project. I'll make a Google Doc to keep track of the papers to make sure that no paper is presented more than once.

3. Present your final project in class on Tuesday or Thursday, week 10.

4. All deliverables for the class are due Friday, 3/20 (the last day of Winter quarter). This will consist of a link to a git repo with code, a write-up, your presentations and all materials presented in parts 1, 2, and 3. Additionally, your repo will have a readme file that contains: a) clear instructions for how to run the project, b) screenshots of the output of your project; c) a video overview of your project. The write-up will be written using the LaTeX ACM SIGCHI Proceedings Format in Overleaf (or another LaTeX editor), which can be found here: <https://www.acm.org/publications/proceedings-template>. All citations should be formatted using BibTeX or another TeX reference manager.