**Problem 2:  Pre-proposal**  
  
Tentative project title:   World Music Play Ground - A network music visualization app.   
  
Name, email, programming comfortably of each member of your group  
  
Name: Antonio A Eggermont, [antonio.eggermont@post.harvard.edu](mailto:antonio.eggermont@post.harvard.edu)   
Programming skills:    Backend Python, JavaScript, HTML, CSS  
  
Research questions and hypotheses. Primary research question(s) and any secondary questions you are trying to answer with your data  
  
My primary question would be the research of the overall community structures based on music habits in major metropolitan cities around the world and events.   Other questions I would like to research include current trends in music based on top tracks with most listeners and their similarities between artists around the world.

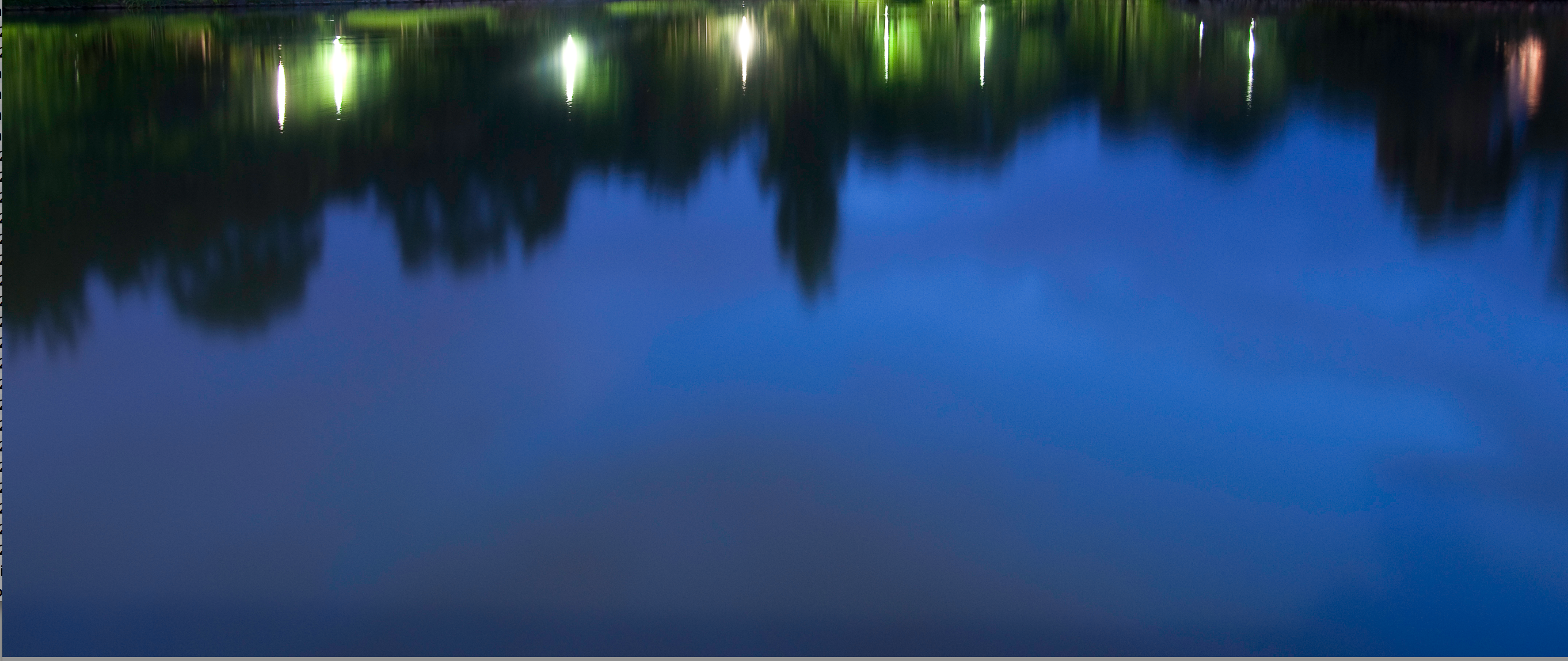
Motivation: Explain why you are interested in your research question(s)  
  
The continues emerge and development of social networks, mobile devices and better Internet connectivity  experiences has enabled the aggregation of data to research music social trends, exchange of information about music preferences, and new music styles around the world. For example, it is easier to use applications like Pandora or ITunes to find music of different styles from virtually any country in the world.  For my second project  I have chosen to build a network visualization of music trends by mapping similarities and differences between artist and countries to better understand music affinities, and personal playing preferences.   
  
Data: What data will you use to construct your visualization? How is it obtained? How is relevant to your research questions?  
  
To obtain the data I will be using last.fm’s  Web services and application programming interfaces: <http://www.last.fm/api/intro> .  Last.fm is a music website which employs a music  recommender system called “audioscrobbler” implementing detailed profiles of registered users about their music taste by recoding details of the songs the user listens to from Internet radio stations or other devices.    
  
Visualization:  
  
How would you display the data? Provide some general ideas that you have for the visualization, broken down into two tiers of priority: those ideas that your project will aim to implement and those ideas that, given time , would ideally be implemented.  
  
For this project, I will display the data in 2D visualizations as portraits of  the world as seen in space and the top tracks, top music  preferences, and events as line spikes formed by the information related to the track, music, or artist.  Ideally, I would like to also create contours creating community structures based on music style similitudes and music habit trends. Although visualization in 3D is discouraged to form charts, I think the visualizations in my project could have the potential to use 3D animation in Web GL to create a 3D experience of the world rotating exposing trends in the world of music that I would like to research.   
  
  
**Problem 3: HTML/CSS**  
  
1. At a high level, what is the purpose of HTML and CSS? How do the two differ?  
  
HTML is a markup language that is used by the document object model (DOM) to structure the contents of a Web page in a  hierarchical form based on attributes such as  doctype, html, head, and body.   I can think of HTML as the “skeleton” of a Web page that helps to give a structure to the content when a given page is being rendered in a browser.  CSS is configuration layer that gives content style and appearance to the HTML and Web page. They both differ in their purpose and they are independent each other. In fact, HTML is markup language while CSS is a presentation language that employs selectors to apply styles to HTML elements  
  
2. What is the purpose of assigning a "class" to an HTML element? What is the difference between a "class" and an "id"? How would one select a division (div) element with class "box" using CSS?  
  
The purpose of assigning a “class” to HTML elements is to apply the same style to group or set of HTML elements in a page. In a way, the “class” works as an identifier that associates a group of HTML elements.  
  
An “id” is a unique identifier associated with an HTML element. They are used to target a specific and only one element in the HTML at a time.  
  
We would select a division (div) element with class ”box” as follows:  
div.box{  }  
  
3. List 5 different HTML elements and provide a short description of the function of each.  
  
**html**- This tag  informs the browser that the page to be rendered is an HTML doc. header –   This tag specifies a header for a HTML document and is used as a container for introductory content or set of navigation links such as style sheets.  
**embed** – This tag defines a container for an external application such as a plug-in for  interactive content  
**iframe** – This tag is an inline frame that is used to embed another document within the HTML document.  
**Thead**: - This tag is used to group header content in an HTML table  and is used in conjunction with the tbody and tfoot elements specifying each part of a table.  
**Div** – This tag acts as a container for different content positioned in different areas of the Web page with applied targeted CSS styles to define layouts.  
  
  
4. What is the difference between margin and padding?  
  
The margin property sets the length of space surrounding a given element. They fall outside any border to help keep a distance with other elements.  In contrast padding is used to provide spacing within a given element by setting the “padding” property.  
  
5. Consider the Gmail Inbox interface. How is the site functionally divided? Create a nested list representing this functional division. Don't worry about extremely fine details; this should help you start:  
  
page  
  top bar  
      links to various Google sites:  
          You  
          Search  
          Images  
          Maps  
          Play  
          YouTube  
          News  
          Gmail  
          Drive  
          Calendar  
          More  
  header bar  
      left side  
          Google logo  
          search bar  
          search button  
          users email address  
   gmail bar  
       left side  
            Gmail pull down menu for contacts, task  
            Select email  pull down menu  
            Refresh button  
            More button  
       right side  
            page range number sections  
            Oldest email button  
            Newest email button  
            Settings pull down menu   
  
    main body page section  
       left side  
           Compose button  
           Inbox   
           Important  
           Sent Mail  
           Drafts  
           Notes  
           More  
           Visibility options,  call phone  
           Search people  
           Contacts  
           Chat  
      right side  
            Top ads and advertisements bar,      
            Select email check box, No stared star button, teach important button,  sender email, ->  
                  subject, hour/time email sent  
             Bottom adds and advertisements bar  
             account storage capacity settings,  copyright and terms,  last account activity    
             Details  
  
  
  
**Problem 5: Reading Questions**

1. Ware argues that human perception involves 2.5 dimensions. Given this assertion, when might a 3D visualization be useful and why?

One of the beauty of 3D animation is the ability to introspect the environment from multiple views facilitating more visibility to the depth field by adjusting these view points in the animation. Objects that are no visible because of occlusion can be made visible by manipulating the point of view in the animation viewer. Perspective can also be enhanced and manipulated in 3D animation.

1. In Chapter 6, Ware presents some implications of pattern recognition and visual working memory on design. Provide an example that harnesses some of these principles (perhaps an advertisement, visualization, or interface) and discuss how the design takes these principles into account. Please include a screenshot, photo, or website URL.

The following is a portion of a photograph I took while I was in a trip to Japan last year. I accidentally did not adjust correctly the aperture of my camera and image turned out to come with a lot of blur. But I though it could be a good example of pattern recognition:



To begin with, the image is upside down and what is shown is the reflection of trees, street lights, sky on a lake’s water in park at sunset. Although the position of the image is upside down, we can determine quickly that the objects on the top of the image are trees or large green plans in a forest. We can not see in detail in the textures and structures of the trees, but their form and outline patterns make help to identify them. Additionally, the blurred light reflections standing up in the image suggest that they are source of lights from the street. The objects in this image make sense because the patterns make us remember or link the objects in the image to memories of how a group of trees look like during the day,. Also, the emphasis of the blue color in the image along with the blurred bright spots make us remember how a park of an outdoor lake would look like at sunset or at sunrise.