CPSC 325
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Research Proposal

1. What are the general DS topic areas (e.g. conceptual/theoretical) your eventual project will fall within

   My eventual project will mine images and metadata, do some sort of analysis on that data (image recognition, color/hue/composition/histogram analysis, etc), report that analysis using data visualization tools (or prediction/identification tool) on a dashboard which will be web hosted.

2. What are the general DS skills (e.g. programming languages, cloud platforms, frameworks, libraries, APIs, algorithms, etc.) you will need to undertake your eventual project

   Flickr API
   I would like to use the Flickr API to data mine for images. I considered instagram initially but their API is very restrictive on mining public posts.
   GCP
   I would like to use GCP for doing cloud computing as well as for web hosting my site.
   Tableau or Plotly/Dash
   I plan on using either Tableau or Plotly/Dash for my dashboard to view data visualizations.
   cv2
   Cv2 is a python library which I can use to analyze images as well as do machine learning on the data if I need.

3. Which of these topics/skills do you already know

   I have worked extensively in python but have not used any of these technologies before so there will be a lot of learning involved.

4. Which of these topics/skills will you need to learn

   I need to learn all the technologies listed above (Flickr API, GCP, Tableau/Dash, and cv2)

5. How you will learn the necessary topics/skills (e.g. online course(s), tutorial series, book(s), etc.) and what appropriate “proof of completion” looks like (e.g. badge(s), certificate(s), demoing completion of a project from a book, etc.)

   There are many tutorials available on youtube to learn the Flickr API as well as documentation. I would like to take the GCP course offered by google. I have also found a coursera course from IBM on Dash that I would take. I did find a course for cv2 but it was very expensive. Instead of that, I have found a few extensive tutorials on youtube that are many hours long that I think can work well as a substitute.