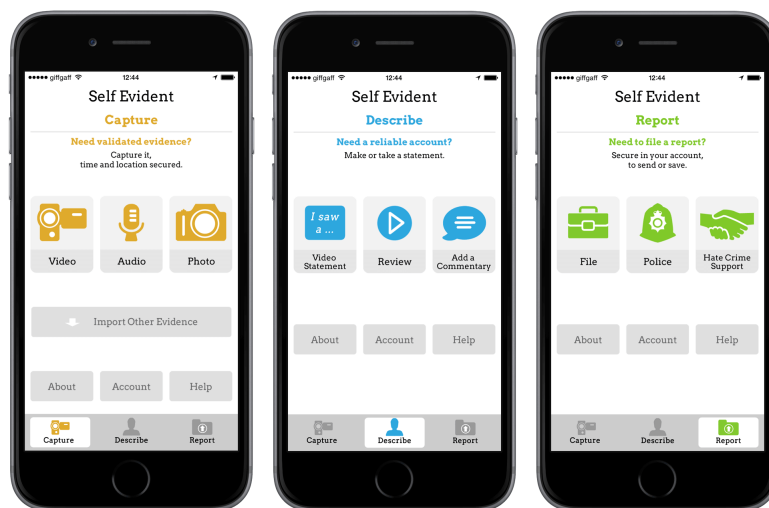Improving the lives of people in Toronto: Initial Brainstorm

- App to use incident report data (possibly ML but idk if it's the right tool) to monitor how safe areas in Toronto are (Ario)
    - Cool! Where is the data coming from? Directly from users, or from authorities? Can we rank incidents by severity in this system? If so, is there a specific notification system that we want to have in place depending on how severe the incident is?
        - The data will come from news reports regarding shootings, robberies and/or assaults, etc in the GTA. The app will rank incidents by severity (for example, physical/sexual assaults are more severe than theft), and design a heatmap of safety accordingly. Another feature could be using location data to notify the user if they are in an unsafe area, and the level of danger to notify them would be chosen by them in settings.
        - We could use a machine learning model to forecast safety ratings for different areas of the city (similar to a weather forecast). This would be similar to where Google shows how busy restaurants are based on the day of the week and previous data
            - This is interesting, but how advanced of a system can we make in 24 hours? Also what factors do we want the machine to consider when forecasting a safety rating? What kind of scale are we using to establish a rating? <- Note for this, we will not be making a model from scratch; I would be using a library like TensorFlow or Sk-Learn and adjusting parameters.
                - This would probably be a "time permitting" feature (I think we can do it but we will see), and the factors would be current safety rating, history of incidents (on days in the past), etc
                - Cool, this makes sense! I think we can probably do this, but for the working prototype, we may need to limit the size of the area that we are doing. Also, in terms of location, are we doing like a shop by shop kind of basis, or are we just picking a street/intersection and telling someone how safe or unsafe it may be?
                    - Dependent. Street is too broad in my opinion, I think a better metric would be city blocks/regions. I think limiting the prototype to downtown Toronto is pretty feasible as well given the timeframe.
        - We can probably divide the gta into different sections if a heat map can't be made in time
            - This is probably too large as well. Maybe just limit it to the downtown area for

Elements that we want to incorporate

- User friendly interface, minimal color palette
- Making use of existing resources, improving upon or localizing resources
- Ability to filter results/search for items based on a certain criteria certain criteria
- API
- Focusing solely on software (?) (This would probably be easiest)
- Major intersections, incident report data, map it to a location, design a heat map
- Start small and expand outwards, limit to downtown toronto for the prototype (area 52)
- 2 years worth of data Year to date
    - Toronto police data - use a webscraper

- Severity score
  - Assault
  - Autotheft
  - Bicycle theft
  - B and e
  - Homicide
  - Robbery
  - Sexual violeation
  - Theft over MV
  - Shooting
  - Theft of over money
- Weighted average to calculate the severity; rating out of 100
  - Civil or ciminal violation
  - Rank severity by length of the sentence for the crime
- Make an app, not a website
- Civilian reported incidents vs police reported incidents
- https://data.torontopolice.on.ca/pages/maps



  - Examples