**Initial Topic Brainstorm for Advanced Topics in GIS**

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1. Dashboard on the 2022 Philadelphia Car Jackings – why are they happening and where?
   1. In 2022, with only 2 weeks into the start of the new year, there have been a reported 100 car jackings and car jacking attempts, with some breaking out into shootings between the intended victim and the car-jacker
   2. QUESTIONS: Where are these car jackings occurring? What time do they most occur at? Who are they targeting (victim demographics, car model), etc? How does it compare to 2021 attempts?
   3. Data sources – Philly Open Data on Crime, Police Reports in Philly etc
   4. Format – Dashboard mapping of shootings, report on the shootings, findings, outcome, etc, or a research paper on why the jump for 2022?
   5. Model to predict car-jackings?
2. Spatial Analysis of the impact of Burmese Pythons in the Florida Everglades
   1. The Burmese python is an invasive species introduced in the Florida everglades in the past 20 years, brought about by pet owners releasing snakes that they couldn’t maintain anymore. These snakes not only eat a large number of native species in the everglades, but provide unnecessary competition to local predators as well in wiping out their food source.
   2. The state of Florida since 2017 has run a program that allows registered “hunters” to find and kill Burmese pythons in the everglades and get paid depending on the size of the animal.
   3. I want to do a spatial analysis to see if the python population has expanded past the everglades and is being found/spotted further north and see if I can estimate the current size of the Burmese python population, along with a method of predicting where they will most likely be or expanding to, potentially using any sort of research in Burma or knowing how they expand and grow.
   4. Data sources: there is a data table from the US government on python sightings, but its only from 2010-2012. I need to find current reports/sightings still.
      1. <https://www.sciencebase.gov/catalog/item/5c9bb1f5e4b0b8a7f62c2f7a>
      2. See if I can get data from this site
         1. <https://www.eddmaps.org/>
      3. <https://www.usgs.gov/faqs/where-are-burmese-pythons-or-other-large-constrictors-distributed-florida#publications>
      4. <https://www.eddmaps.org/distribution/viewmap.cfm?sub=20461>