DIFFERENCES IN WIND SPEED CAUSED BY CATEGORY 4/5 HURRICANES IN THE STATES BORDERING THE GULF OF MEXICO

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PURPOSE

- THE PURPOSE OF THIS MAP IS TO COMPARE THE DIFFERENCES IN WIND VELOCITY BETWEEN DIFFERENT STATES BORDERING THE GULF OF MEXICO. THE LINES ON THE MAP SHOW THE PATHS OF DIFFERENT CATEGORY 4 AND 5 HURRICANES. THESE PATHS ARE THOSE OF HURRICANES MICHAEL, MATTHEW, IRMA, RITA, KATRINA, AND HARVEY. THE POINTS ON THE PATHS OF THE HURRICANES ARE DIFFERENT SIZES TO SHOW THE DIFFERENT WIND SPEEDS IN DIFFERENT PLACES.
- ANOTHER PURPOSE WAS TO SHOW THAT THROUGHOUT THE YEARS AS THE CLIMATE CRISIS WORSENED, THE SEA LEVELS INCREASED, AND THE ENVIRONMENT GOT WARMER, HURRICANES WERE STRONGER AND MORE LIKELY TO BECOME CATEGORY 4 AND 5.

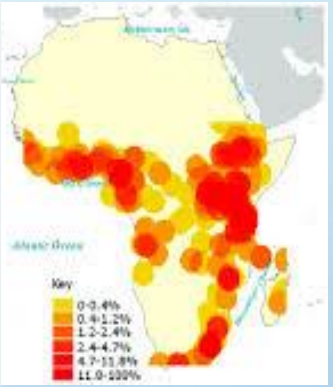
LOCATION

The states bordering the Gulf of Mexico. Florida, Mississippi, Alabama, Louisiana, and Texas

ANALYSIS

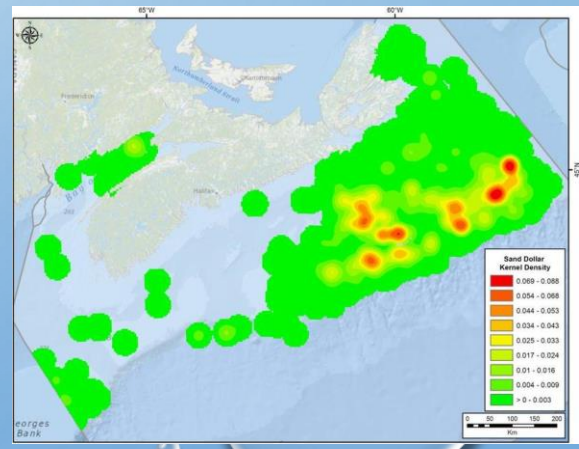
I used Hotspot Analysis

- This analysis showed the spatial clustering in my data, showing common high and low values between layers to help me compare different wind speeds.



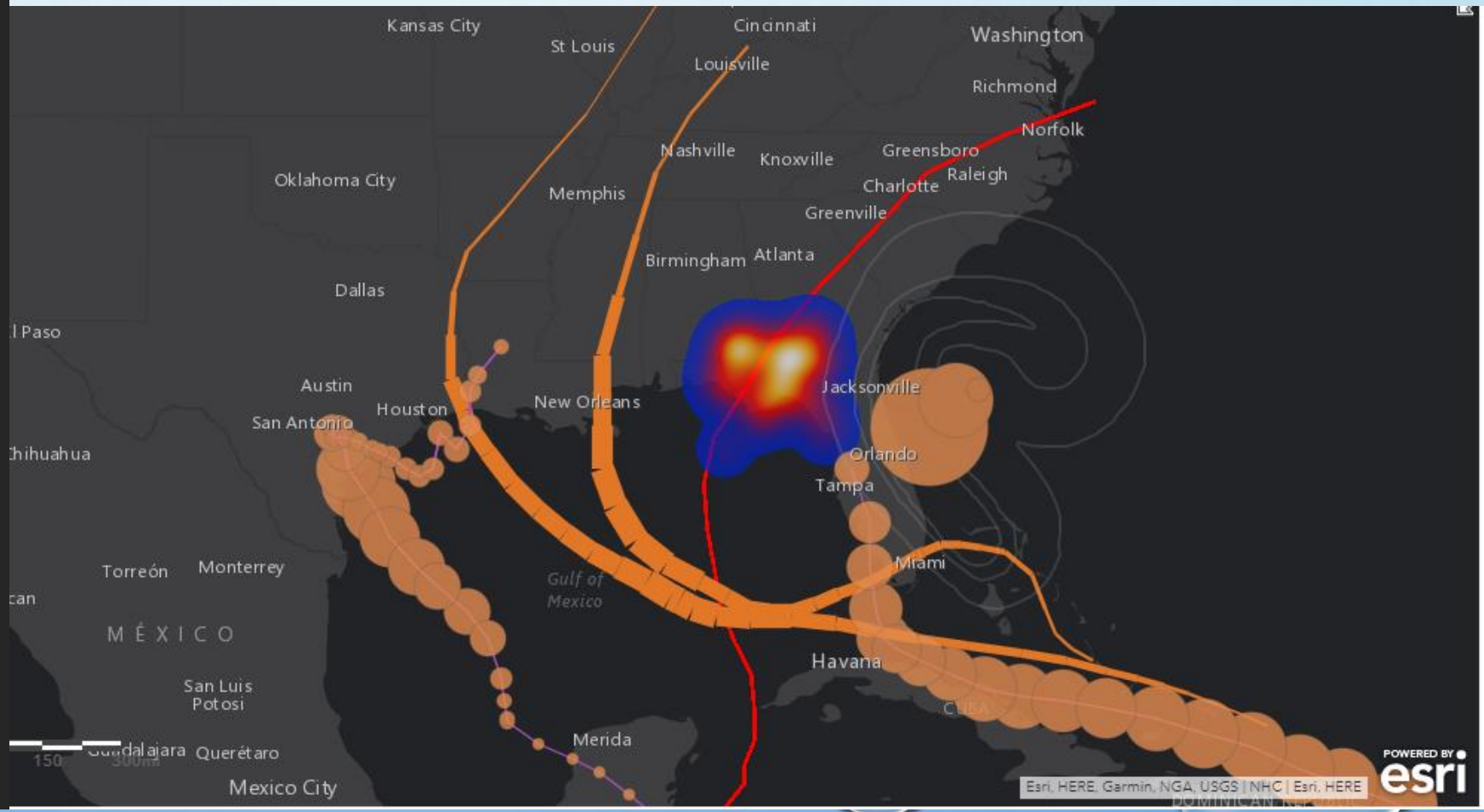
I also used Density Analysis

- Since density analysis takes known values of some event that happened and displays them across the map, I used this tool to show the different concentrations of wind speeds of a certain area affected by any of these 6 hurricanes.



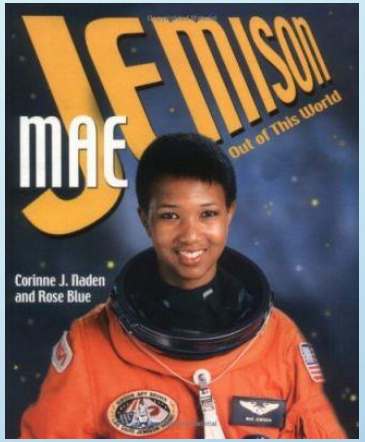
RESULTS

I found that hurricane wind speeds were higher when the hurricane was closer to the Gulf, or a body of water. This makes sense considering water is the hurricanes source of strength. When the hurricane passes over the land it gets weaker causing wind speeds to decrease which is shown by the shapes smaller in size. Also I found that Harvey and Irma being the more recent of the 6 hurricanes became category 4 and 5 storms faster, compared to the older hurricanes. This supports the theory that climate change plays a role in the strength of these storms.



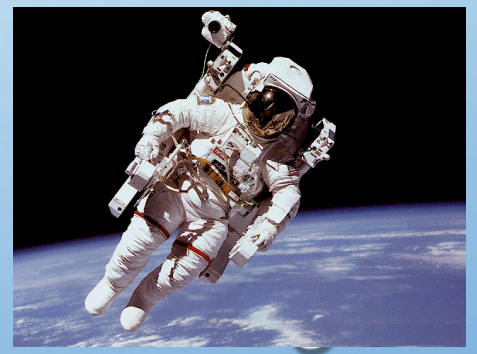
CAREER INTERESTS

- Who Am I?
  - I like running, reading, shopping, and hanging out with friends.
  - I am good at math and science.
  - I am investigative and artistic.
- Where I'm Headed?
  - The career I researched was astronomy, aerospace engineering, and astrophysics. These careers deal with questioning and studying the universe and all the components that make it up.
  - I would need a PhD for these careers.
  - I like that an astronomer works with ideas and theories to learn about space which we know very little about.



CAREER INTERESTS (CONTINUED)

- How Can I Get There?
  - This summer I will finish out this camp, work at Wegmans, and look up colleges and other things that can help me later down the road.
  - This year I will continue to work hard and stay involved in my high school; excelling academically, artistically, and athletically. That way I can be well rounded, and more likely to be accepted into colleges.
  - People who can help me are my parents, family, teachers, and friends.
  - GIS can be relevant in my career by mapping out the paths rovers take on Mars or map out routes for rockets and satellites to take.



REFERENCES

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- HTTPS://ARCG.IS/098UOS