**Jet Emission Tracker (JET): Tracking the Private Jet Emissions of Celebrities**

**Inspiration**

**ElonJet**

ElonJet tracks Elon Musk’s private jet location and provides updates on its location to various forms of social media, but most notably *X* (formally known as *Twitter*), the site owned by Elon.

**Taylor Swift**

Recently, I’ve seen several social media posts describing the huge number of emissions released by Taylor Swift through her excessive traveling via private jet. Taylor Swift has spoken in support of the environment, which I find ironic in this context.

**Goals and Timeline**

**Jet Tracking**

This is the first goal of JET. By tracking private jets in *close* to real time, JET will have a professional, sophisticated, and eye-catching visualization as the forefront of the website. This is also an essential step in the next goal, emission tracking. I expect to work on this portion for a few weeks at most to get it simply working, the beautiful visual will take place after the important aspects of this project are complete.

**Emission Tracking**

The component of JET that will separate it from other jet tracking sites will be the emission statistics that it will provide. By tracking the jets, we can use the information about the model of the jet, and the details of the trips it takes to calculate, or at least provide an accurate estimate, of the emissions the jets produce. Research still needs to be done on whether or not historical data is accessible, as that would be ideal to capture the full scope of the huge amount of pollution done by private jet passengers. This portion will likely take a bit longer than the jet tracking as I will have to calculate the number of emissions based on the model of the aircraft and there will certainly be several different models to track.

**A Professional Website**

After the first two goals are met, all that will be left is designing a website that is professional and informative. I want to leave as much time as possible to work on this stage so that I can plan out everything exactly as I want. The hardest part here will be developing the jet tracking visualization, which will have to be easy to read, interactive, and responsive. This will take me through the end of the semester.

**Technology**

**Tech Stack**

JET will utilize Next.js to set up the project as that is the technology I, the sole developer, have the most experience with and it will allow me to focus more on the content of the project, rather than learning a whole new technology. With Next.js I will be using React.js and Express.js for my frontend and backend as, again, these are the frameworks I have the most experience with.

**ADS-B**

JET will rely on *Automatic Dependent Surveillance-Broadcast*, ADS-B, data in order to track private jets. Most modern aircraft are equipped with an ADS-B transponder that broadcasts the aircraft’s location, speed, altitude, and other important data. This data is publicly available unless aircrafts specifically apply to the FAA for privacy. I will access the specific aircrafts through the API found at <https://rapidapi.com/adsbx/api/adsbexchange-com1/>, and requesting via the tail number (registration number) of the aircraft.

**Final Notes**

There is a lack of a reliable database that tracks celebrities and the tail numbers of their jets. JET will need to have its own (publicly accessible) database that contains this information and is constantly updated when new jets are found.