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Adaptive Response Modeling Using GIS, Blog 3

Kevin Keys
Virginia Commonwealth University

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BIKE GIS

OCTOBER 5, 2015 | KEYSKA2 | LEAVE A COMMENT

The purpose of this class was to use GIS to find population hotspots in real time. We used social media such as Twitter and Instagram to see live location enabled tweets that were then projected on a map of Richmond with the UCI road courses. We could then, in theory, provide assistance to waste/recycling collection, by letting them know where the most spectators were for the race, because where there's people, there's trash. Rather than just driving around and trying to find where waste was deposited you can use these GIS maps to find where people actually were, to ensure al the waste gets cleaned up. This is an example of spatial technology because it's taking real data (tweets representing actual population hotspots) and incorporated it into a GIS map that can be used by professionals in the field.

The accuracy of the map were working is pretty good. It is within a couple of meters, so we might not be able to pin point specific people, but we can at least find out what block they're on. The accuracy depends on what kind of phone a person has and/or what features they have turned on. For example turning on GPS, and Wi-Fi would allow for better signal and therefor give a more specific location. We can assume that the location where the most people are tweeting are the hotspots with the most spectators.

The map was developed by using data provided from other users through ArcGIS Online as well as from our instructor. All the online data seemed to be very accurate and reliable despite not coming from official sources.

This tool is useful in finding where people actually are. There were several designated fan zones that were definitely populated, but we also found some other areas along the course where a lot of people were gathering to watch the race. We would've been able to include more thorough results if we could include multiple hashtags in our search queries, which would allow us to see more tweets (people) at

once.
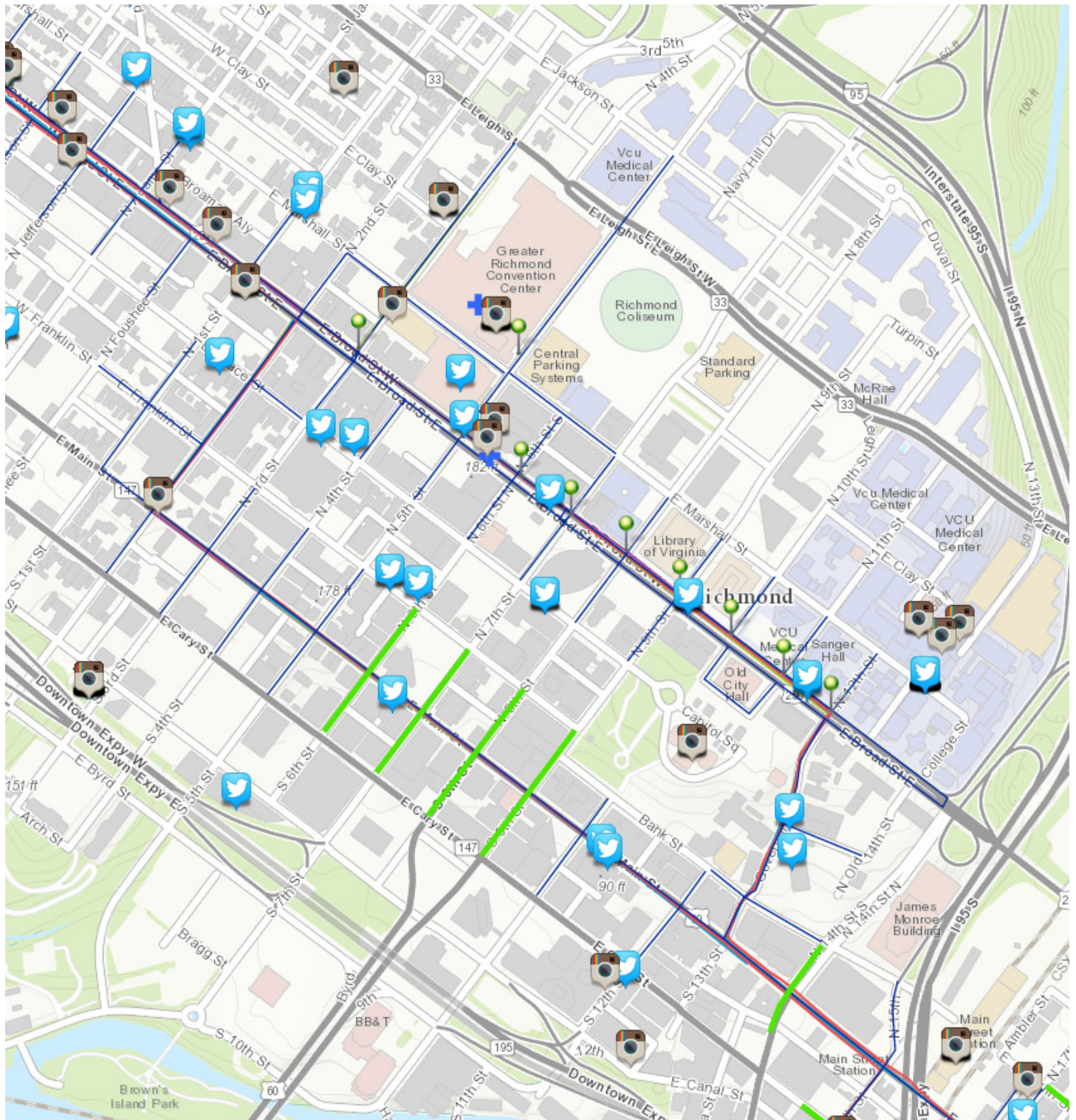
Above, we can see a high concentration of people along Broad Street and near the Convention Center.

Link to original map – http://vcu-ricerivers.maps.arcgis.com/home/webmap/viewer.html?
webmap=49e2c5fa84514781a9dfaa03513c8936