

2015

Adaptive Response Modeling Using GIS, Blog 2

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UCI ROAD WORLD CHAMPIONSHIPS
RICHMOND 2015 | USA

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(<https://rampages.us/pfszbikegis/>)

Adaptive Response Model

GIS and Twitter Modeling during UCI Race

📅 SEPTEMBER 29, 2015 ([HTTPS://RAMPAGES.US/PFSZBIKEGIS/2015/09/29/GIS-AND-TWITTER-MODELING-DURING-UCI-RACE/](https://rampages.us/pfszbikegis/2015/09/29/gis-and-twitter-modeling-during-uci-race/)) 👤 SAENZZLUETPF

([HTTPS://RAMPAGES.US/PFSZBIKEGIS/AUTHOR/SAENZZLUETPF/](https://rampages.us/pfszbikegis/author/saenzzluetpf/))



(<http://rampages.us/pfszbikegis/wp-content/uploads/sites/11936/2015/09/gis.png>)

Twitter Feed representing Population Density

- Accuracy: How accurate is the map we are working with? What are the limitations we are working within? What assumptions are we making about the data and map?
 - The accuracy of the map is approximately 10 feet. According to TriState Engineering, “The Samsung Galaxy Note, the S3, the Google Nexus 4, the iPhone 5, and several other hot-off-the-assembly-line phones now implement GNSS receivers in them that are capable of acquiring 10-foot positional accuracy. And fast, too. It only takes 5 to 10 seconds of open sky to get a 10-foot fix on the ground, and it doesn’t need Wi-Fi hotspots or cell towers to assist any longer.” Thus, our map has a good accuracy for this population density model since a 10 feet difference would not be detrimental to our data analysis of where people are located.
 - (Mobile Phone GPS Accuracy? (n.d.). Retrieved October 4, 2015, from <http://www.tristate-engineering.com/ideas-gis/mobile-phone-gps-accuracy>)
 - One limitation was that even though the most modern smartphones have an accuracy of about 10 feet, older phones could be highly inaccurate. In addition, by utilizing solely a twitter feed to analyze population density, the population that did not use twitter was not considered nor represented.
- Thoughts on how the map was developed
 - The map was developed coherently, yet it could have been more complex in order to include as much of the population as possible, since there are more social medias or even location services that could tell us the population density. Otherwise, our map was immensely explicit and informational since it obtained the course paths, street closures, fan zones, the city fire and police stations, a traffic service, and most importantly, the location of eco-stations.
- Thoughts on the process during the race – the level of interaction
 - The level of interaction was moderate and adequate as we were able to experience the race momentarily on Friday, September 25, 2015 for the Men’s Under 23 Road Circuit, and afterwards we gathered to analyze the incoming twitter data from the aficionado population.
- Discussion on what a tool such as this is helpful, and where it’s not helpful. Include discussion on things other folks that do the same thing next race should be aware of and thoughts on what could have worked better, or what datasets would work better.
 - This tool is helpful as an analytical reference to a situation after an event has occurred. For this race, it seemed like this model was going to be more helpful in determining how the city responded with the Eco-stations rather than allowing us to immediately respond to an issue or challenge. In order to improve this model so that it could be a live and immediate response model, the city could have promoted certain hashtags to be used with Twitter, along with sponsors. For future reference, there should be more eco-stations, and not necessarily just in situ at fan zones. Eco-stations could be placed every two to four blocks, and specially where restaurants are located near the race. Our datasets were reliable and should be considered as well for future races; some datasets that could also be included could be a crime rate index in order to establish more police presence in certain areas, a typical/updated population density of the city based on census information, and a dataset that indicates where restaurants and stores are located—if this map where to be used live and on a scene, then an individual could help a fan or foreigner find stores and places to eat.

🔖 #RICHMOND2015 ([HTTPS://RAMPAGES.US/PFSZBIKEGIS/TAG/RICHMOND2015/](https://rampages.us/pfszbikegis/tag/richmond2015/)), #UCI ([HTTPS://RAMPAGES.US/PFSZBIKEGIS/TAG/UCI/](https://rampages.us/pfszbikegis/tag/uci/)), #UCI2015

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