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Title: ***The Impact of Incentivization on the Usability of a Crowdsourced App***

In many of the world's biggest cities and across university campuses, the availability of parking remains a contentious issue for drivers. According to INRIX, a specialist in transportation analytics, drivers on average in 2017 spent "an average of 17 hours a year searching for spots on streets, in lots, or in garages". This added up to roughly $345 per driver in wasted time, fuel, and emissions. A UN report stated that, worldwide, 30% of C02 emissions from vehicles are caused by traffic congestion due to parking. Furthermore, 23% of Americans were involved in road rage due to stress about parking. On university campuses, not being able to find parking on time can lead to students and professors missing important lectures, exams, and other university events, which as mentioned before, can be cause for unnecessary stress.

After studying a variety of different parking monitoring systems throughout the globe, we decided to study whether crowdsourcing would be an effective tool to monitor parking capacity. We could use crowdsourcing to gather information from all the drivers on campus by means of a mobile app. Crowdsourcing is not only just an efficient solution but would also be the cheapest, easiest to implement, and the safest. This is why we developed *SpeedySpot*, a crowdsourced parking app for SBU. Using data from Transportation and Parking Services, we created an app with all of the West Campus parking lots, where users can "check-in" and "check out", while also being able to see the number of current spots open in each lot. When a user checks in, there is 1 less available spot on the app and vice versa. That way, with enough users, we can get a fairly accurate estimate as to how empty or full a parking lot is, reducing the amount of time

spent by drivers looking for a parking spot. Our app also has two kinds of users, registered users, and guest users. Registered users have to create an account and answer a questionnaire before being able to use the app, while guests don't have to. However, registered users accumulate points for each check-in, points that can be redeemed for a reward. With *SpeedySpot*, we intended to study whether incentivizing the app would result in an increased amount of usage. Unfortunately, due to the university shifting to distance learning, we never had the chance to launch our app to the university body and collect results.