

Empty tables, crowded gyms: Learning with Density

August 2 2015, by Nancy Owano



Futurists are encouraged by possibilities residing in Internet-connected sensors for making us better aware of how to get through the day,



Now a people-counting product called Density, a combo of hardware and software app, proposes one more step in humanizing data-collecting for our own benefit—figuring out how the day will go based on people-traffic. Density is both sensor and app; the population data of a <u>place</u> is shared real-time via the cloud.

Placed on a doorframe, it is designed to tell you how crowded or empty is a conference room, store, restaurant or other place you need or want to visit.

"Our sensor gets attached to a place's entrance, measures anonymous movement as people come and go, and generates real-time and historical data that can be integrated anywhere," said Density. Density uses infrared light to measure movement. By design, Density cannot capture any personally identifiable information about consumers.

The app works by surfacing data collected by small, Internet-connected, <u>infrared sensors</u> in the doorway of each business, said Rachel Metz in *MIT Technology Review*.

Using Density, a restaurant, for example, could detect and then broadcast if there were open tables. If you wanted to visit a gym, you could check online to see if the treadmills were free to use. As for night life, "No one likes a bar that's too <u>crowded</u>, or for that matter, one that's too dead," said *Fast Company*. Density could help.

This would not be the first time somebody has thought of a solution to count people. <u>Surveillance</u> cameras and so-called break-beam systems, said Metz, have been used to keep tally based on how often the infrared beam is broken by a passerby.

Metz wrote that Density CEO Andrew Farah said Density's aim was to provide another way which would do away with privacy concerns over



cameras, while also collecting data in realtime. For business owners, the sensors would help them understand their foot traffic from day to day.

Developers would be another group to benefit, through a Density API. Density, said psfk, is "completely Internet-connected, and the data it collects can be accessed by the developer <u>community</u>, which gives rise to a whole new field of entrepreneurial startups."

So far, said Metz, Density has installed prototypes of its sensors in over a dozen businesses. They include coffee shops as well as other types of establishments. Workfrom, for example, is a website that is aggregating data to notify remote workers of the least crowded places to get work done, said psfk

"Their best spots get very busy," said Density, and Density measures realtime seating capacity. Workfrom integrates the data into their website.

Density said another example is in Berkeley, California, where "a team is adding Density to school gyms and workspaces. From anywhere on campus, students will be able to see if a popular place is busy or quiet."

Stacey Higginbotham of *Fortune*, in an earlier report on the startup, commented that Density's technology offering "has myriad potential applications. If applied to public institutions like the post office or motor-vehicles departments, Density's technology looks less like a plaything and more like a valuable tool for making the service economy more <u>efficient</u>."

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