Google's Project Guideline allows blind joggers to run without assistance

November 27 2020, by Bob Yirka

A team of researchers at Google Research has unveiled a new project they have been working on that uses AI technology to allow a blind person to follow a path without assistance. In their announcement of the project, called Project Guideline, they introduce Thomas Panek,

President & CEO of an organization called Guiding Eyes for the Blind. The Goggle Research team credits Panek with coming up with the idea for the new technology and for providing guidance and inspiration for the project.

The technology the team developed consists of a smartphone connected to the web and bone-conducting headphones. The smartphone (which is affixed to the waist) is used to look ahead on the ground for a yellow line that has been painted there to serve as a guideline. The information from the phone is sent to an AI app on a Google server where it is continually processed. It sends back signals to the phone that are converted to audio tones that are played in the ears of the runner. If the runner veers too far to the left, the tone grows louder in the left ear, and to the right ear if the runner veers right. Artificial intelligence was needed because real-world conditions vary. The software needed to be able to track the painted line even if the runner was bouncing up and down and it needed to be able to adjust to changing light conditions, or unexpected events, such as leaves partially covering a line.

As the project has unfolded, Panek has served as the testing agent. And as the technology has improved, he has moved from walking a course in a small gymnasium to running a course in an outdoor park. The next test will involve taking part in NYRR's Virtual Run for Thanks 5K using a line painted temporarily along a path in New York's Central Park. The project has expanded over the past months to include other blind runners willing to test the new technology. The team at Google Research plan to continue the work looking to see if their new technology might be useful for the broader blind community as a means for moving around independently in the real world.

More information: blog.google/outreach-initiativ … y/project-guideline/

Citation: Google's Project Guideline allows blind joggers to run without assistance (2020, November 27) retrieved 13 March 2024 from https://techxplore.com/news/2020-11-google-guideline-joggers.html