Knightscope Autonomous Data Machine (Security Guard Robot)

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CS 35L Lab 8

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K5

Courtesy Photo

Purpose

- Knightscope Inc. is found after the Sandy Hook Elementary's tragedy by William Santana Li.

- 'You are never going to have an armed officer in every school',William Santana Li.

- He hopes to create a tool that will actually help prevent crimes.

K5

https://www.youtube.com/watch?v=Yy6CVW1yiwc

Specs and Technology

- Size? H:60 inches, L: 36 inches, W:32 inches and weight 300 pounds

- Mobility? Maximum speed: 18 miles per hour, but the normal speed is at 1 to 3 miles per hour

- How to enable K5 stay in one specific location? The robot itself is able to construct a geo-fenced(virtual) perimeter (robotic mapping) in a real-world geographical area that makes it stay within one area.

Specs and Technology

- Image process? K5 creates a set of data points in some coordinate system(point cloud) to shows 3-D image of the surrounding in the geo-fenced(virtual) area.

- Optical Character Recognition: 1. detects criminal records through facial recognition. 2. Scans up to 1500 license plates/min (found criminal record alert the policy).

Specs and Technology

- 360-degree HD video capture.

- K5 will notify local authorities if the sounds beyond 100 decibels.

- Ultrasonic sensor to detect object in surrounding and object's movement (over-speed driving)

- Other features include air quality, infrared, radar, lidar and thermal imaging.

Fun Facts

- The company still testing the K5, and expecting the K5 to work in public place such as shopping malls and school in the future.

- Uber rents the robotic security guard at cost of $7 an hour in their parking lot, which it is cheaper than a security guard.

- Will the robot take away our job opportunities in the future?

Concerns

- Will K5 protect human or spy on human? (K5 can take pictures and video of people)
- K5's Ability to prevent crime? Can detect suspicious activities but cannot arrest the criminals or stop an attack.

References

- http://www.usatoday.com/story/tech/2014/01/26/knightscope-k5-police-robot/4018047/

- http://www.cio.com/article/2463903/robotics/5-uses-for-the-surveillance-robot-of-tomorrow.html

Thank you!
QA?