7 Things about Ozobot

1 - What is it?

Ozobot is Ozobot & Evollve, Inc.'s take on smart robotics. These tiny robots come in a few forms, the Bits model having only wheels and a sensor while the more advanced Evo model has Bluetooth connectivity and programming capability as well. Using different colored markers to denote different directions, users can draw paths for them to follow and give commands such as slow down, speed up, or stop.

2 - How does it work?

All Ozobots work with a similar premise, using downward facing cameras to detect the color of the line under it. They follow lines using a back-and- forth motion (if the camera detects a change from black to white, the Ozobot will shift to get back onto the line and continue). These cameras also detect colors which give different commands via different combinations of colors.

3 - Who’s doing it?

Ozobot was developed by a company called Ozobot & Evollve Inc. Evollve is a company dedicated to designing small smart robotics..

4 - Why is it significant?

Right now, Ozobot presents a fun, easy way to get kids comfortable with robotics and programming. The more advanced model can actually be programmed, but it’s simple to have a sheet of codes and just draw designs on a piece of paper with colored markers.

5 - What are the downsides?

There are a few downsides to this piece of technology. For one, the price tag: the most basic Bits model is still $99 from the main site. This is fairly expensive, and even more so for a classroom set ($1199!) Another is some mild camera issues, occasionally losing its tracking on corners or long straightaways if the Ozobot moves too quickly.

6 - Where is it going?

Line tracking robotics are already being put to use. Amazon has been shifting to a more autonomous system with line-following distribution robots in their storage warehouses, and this trend will continue as costs for this technology decrease. Another possible place this technology could help optimize would be self-driving cars. Imagine the morning commute when roads are simply lines, and our cars move seamlessly through the streets on their own volition while we read, converse, or eat our rushed breakfasts.

7 - What are the implications for higher education?

The main implication Ozobot has for higher education is actually more indirect. Bringing technology like this into the elementary classroom would be a fun learning experience for the

children, and would get them comfortable with the idea of robotics and programming much earlier. The world needs more people in computer science, engineering, and software design, and if we can instill interest in that from a younger age, we will be going in the right direction.