To what extent are the following computer systems instances of artificial intelligence:

- Supermarket bar code scanners.
- Web search engines.
- Voice-activated telephone menus.
- Internet routing algorithms that respond dynamically to the state of the network.

Intelligence is the ability to achieve complex goals. This reduces the problem to measuring the complexity of the goals and the machines' ability of solving them.

As a programmer, this is how I'd rate the complexity of goals (easiest to toughest)

- Bar code scanners
- · Voice activated menus
- Routing algorithms that respond dynamically
- Web search engines

Instead of a binary intelligent vs non-intelligent classification, it's more appropriate to look at the increasing complexity of the problems and therefore the increasing intelligence.

It is worthwhile to notice that although web search engines are deemed more intelligent than bar code scanners, they cannot scan any bar codes.