Exploring methods of quantifying intelligence using theories in machine learning

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Intelligence has been defined as many different things, and each of these definitions have allowed us to quantify or understand intelligence in a different way. The simple act of telling people how intelligent she is, is the most basic act of quantifying intelligence that we do. By stating that a particular individual is intelligent we could mean a couple things. A person's intelligence can be defined to be the knowledge gained, the accomplishments, the ability to understand other individuals, their community/society, their an ability to reason, and much more. These are certain characteristics that we think about when making a judgement about an individual's intelligence, and the major of society does this. The most intelligent individuals part-take in this as well by accepting awards that claim they have a high IQ, and less intelligent individuals part-take in this by observing this phenomenon.

Therefore, there is an inherit part of us through our perception of the world that needs to try and judge intelligence.

The idea of trying to quantify intelligence or measuring intelligence was first introduced by the field of phrenology, and Franz Joseph Gall who is known to be the founder of the field. Franz Joseph Gall wanted to try study the localization of the mental functions in the brain by observing skull sizes, and facial features of people. Even though the field of phrenology wasn't ultimately success, some of the concepts such as attempting to quantify

intelligence intrigued the scientific community.

Intelligence and why create a framework for intelligence?

How people have quantified intelligence in the past - IQ tests. Done by powerful individuals for gains (help recruitment for military).

"Artificial Intelligence (AI) was the first large scientific community, established already in the mid 1950s, working on problems that require intelligence to be solved" (Włodzisław, 1).

Quantifying and defining intelligence and frameworks around it became important when

Hawkins is an electrical engineer, and hasn't had any professional experience in neuroscience. His framework approaches the problem from an engineer's perspective as well as his personal study of the research done on the cerebral cortex to formulate his framework.

Jeff Hawkin's Intelligence

Intelligence in the Machine Learning community with just a mathematical training

References

[1] Hawkins, Jeff, and Sandra Blakeslee, *On Intelligence*. New York: Henry Holt, 2005. Print.

[2] Duch, Włodzisław. "What Is Computational Intelligence and What Could It Become?" Challenges for Computational Intelligence. 2007: n. pag. Print.