GPS_Paper

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Analysis of "GPS, A Program that Simulates Human Thought"

Discussion:

This was a fascinating paper that clearly explains and demonstrates the use of the GPS program, to be honest I wish I would have read this paper before doing the assignment as I would have had a much better understanding of how the program worked and what I was trying to help it express. This paper begins with the writers describing that their goal was to prove that it was possible to make a program that could emulate the problem solving process of a human. They surmised that the best way of doing this was to make a program that would have a set of clearly laid out rules or "operations" that could be freely used in order to take a specific goal and recursively break it into smaller goals leading up to the final state. In order to test the validity of the program they had made. They gave a human test subject the same set of rules and asked him to convert one statement into another using the provided rules. In order to this he had to explain each step to another person to have them perform the desired changes. All of the steps and statements given by the test subject were recorded and then compared to the trace the plan given by the program. It was noted that many of the recursive goals set by the program coincided with the test subject's out thought processes as he stated what the next version of the expression should look like and what rules he could use to get to that next step were. The writers were able to conclude using their results that the behavior of an intelligent human can be understood as the product of a complex yet finite set of laws to govern the possibilities.

Likes:

What I enjoyed most from this paper was the ease of following the authors' methodology and phrasing. The paper felt slightly less formal than many of the papers were read before and seemed more like a one on one discussion or a good lecture from a professor, rather than a published article. I also found it more convincing when the authors' made their arguments because they had an actual solve the same problem as the program so that the two "traces" could be compared. Generally other researchers just described a hypothetical outcome of a person's actions instead of actually getting a person to perform the operations. This made the paper much more compelling.

Inspiration:

While working on the coding for this assignment and while reading this paper I couldn't stop thinking about how this would be an entertaining and maybe even useful way of anticipating a person's actions as well. I feel like it would be interesting to make a similar program but instead of testing to see if the program properly emulated a person to see if, with a sufficiently detailed set of possible operations, this program could be used to anticipate a persons actions as they work towards a specific goal. Whether that goal be to win a game, fight a war, build something, or go somewhere.