

# Harry Potter meets Carsharing

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Today, we introduced a bit of Harry Potter wizardry for our member services and fleet team. Sure, there have been 7 books written and the last movies is now in the video shops.....but we got there eventually. Today we released a new plugin which integrates and customises an open source decision tree app into our back end.

In simple terms - it's a help wizard which helps non-technical people solve technical problems. In technical terms..

A decision tree is a decision support tool that uses a tree-like graph or model of decisions and their possible consequences, including chance event outcomes, resource costs, and utility. It is one way to display an algorithm. Decision trees are commonly used in operations research, specifically in decision analysis, to help identify a strategy most likely to reach a goal. If in practice decisions have to be taken online with no recall under incomplete knowledge, a decision tree should be paralleled by a Probability model as a best choice model or online selection model algorithm. Another use of decision trees is as a descriptive means for calculating conditional probabilities.

We introduced this so new members of our fleet and member services team could solve complex issues on the phone within seconds. The best part is, as long as they diagnoses the problem correctly, we're certain they'll get the right answer every time!

For example, if you're out on the road in one of our cars, and you're out of range of a mobile phone tower - and you've locked your keys in the car....how do you get your keys out? This is probably the most simple one we have to deal with - but you'd be suprised how often this question gets asked of the new member services team member on their first day.

Usually they look desperately around for someone else to help them (everyone else is usually on the phone!), with the customer growing increasingly impatient on the end of the phone, and when they finally find the answer their stress levels have risen to 'I need a chocolate bar, RIGHT NOW!' levels....and our plugin aims to solve this problem.

We also programmed in some funky path tracking, which means we can see the frequency of problems, and what solutions are being presented - and the paths that are being followed to get to the solution.

We'd had a good look around at off the shelf solutions - there simply weren't any that did exactly what we needed - so we mashed up this one and took it our for a spin with our customer service team.

"Well, I've put all my combined problem diagnostic knowledge into this plugin - and now every member of my team knows as much as I do.." said Brooke Warner, member services manager. "If I add a new problem to be diagnosed, I can periodically revise the decision tree paths to continually improve the speed and accuracy of the solution based on real historical data."

Fleetcutter is committed to ongoing 'operations research' - trying to make incremental improvements to the operations of its clients - and this plugin fits neatly within that ambition.

"This was fun to make" said Nic Lowe, co-founder of Fleetcutter. "The first decision tree I built to show Brooke posed the problem "Should Brooke marry her boyfriend?". While I haven't seen a ring yet, I'm confident she'll apply the same disciplined decision making she shows at work to that very important personal question!"