



## Navigation in an unknown environment

6 Months Graduate Internship

### Project Description

The internship is a part of a crowd simulation in a Theme Park for a big American company. The aim is to provide park designers the tools to compare several park layouts according to the reactions of virtual visitors. The visitors' behaviors must be realistic enough so that the emergent crowd situations are as close as possible to the ones observed in reality. The simulations are created with a graphical editor that helps to place interactive objects in virtual parks, and set their attributes.

### Topic Description

Real visitors usually acquire knowledge about the park as they walk all over it. However, virtual visitors currently have a perfect knowledge of their environment. Thus, the simulation is altered when visitors take shortcuts and avoid crowded places that they should not know about.

The aim of the internship is to simulate a specific knowledge for each visitor, that evolves with his explorations and the signs he crosses. More realistic behaviors (looking for and following a sign, roaming, following the crowd, *etc.*) will then be designed with the help of the SpirOpsAI Editor.

### Internship Description

The internship will take place within our R&D team, localized in a warm and friendly open space of the 11<sup>th</sup> district of Paris. The payment is about 400 euros monthly, with the prospect of joining the team in a fixed term contract, rolling contract or a PhD thesis, based on the motivations and qualities shown during the internship. Applications can be sent to [contact@spirops.com](mailto:contact@spirops.com).

### Keywords

Artificial Intelligence, Crowd Simulation, Pathfind, Partial Knowledge, Navigation behaviors, C++