FC TWENTE QUEUE MONITOR

In short

Your job	Develop and test a stand-alone node (prototype) consisting of a raspberry pi and camera that can detect how many people are standing in front of a sales point for food or drinks (or the toilet), and have that data be polled from other devices on the network.
Your goal	To provide FC Twente with more detailed insight into queuing and potentially also provide this information to visitors so they can reduce their waiting time by visiting less busy sales points
Possible solutions	A stand-alone prototype consisting of a raspberry pi and camera and computer vision software to detect the number of people standing in line. A setup procedure where the queuing area can be indicated is probably helpful. The queuing numbers need to be pollable. FC Twente wants to be able to see the queuing history in a dashboard.
About you	• You want to learn more about computer vision • You like to develop and test new concepts

Reason for this assignment

FC Twente has various sales points where visitors can get food and drinks during games. Some of these points are more crowded than others, affected by their location but also by the moment during the game. FC Twente would like more insight into these numbers and how they develop over time. In the future this information could also be visualized to visitors, so they can reduce their wait time by going to sales points that are less crowded.

Your job

Your job is to develop a stand-alone node prototype that can detect how many people are standing in front of a sales point. This prototype will probably consist of a raspberry pi, a camera, and computer vision software. The prototype will need to be properly tested. The dashboard should provide the information in a clear way that supports the kinds of conclusions FC Twente would like to be able to draw from it.

Your client

Lectorate Ambient Intelligence (AmI) is a research group that specializes in making our environment smart. Their research comprises the fields of embedded systems, data science and augmented interaction. Examples of their projects can be seen at www.saxion.nl/ami. Reimbursement is 230 euros per month.