

CS2810 – Team Project and CS3811 – Team Project in HCI

Initial Project Description

A Restaurant Management System (ARMS)

Oaxaca is a restaurant group that has been slowly growing its London and UK presence over the last 10 years and now they have 25 restaurants. When they started in 2007 their competitive advantage was their menu, a unique style of Mexican street food and their table service.

Recently they have noticed that a number of competitors have gone to market with a similar strategy: a unique menu and great table service. Their Chief Operations Officer (COO) fundamentally believes that to out compete Oaxaca will need to outgrow their competition by opening more restaurants at a faster rate than they've been doing so.

There is a problem though. Hiring and training people fast enough to fill the staffing needs for the restaurants is hard under normal circumstances but, at this elevated rate of growth, the COO is worried that their customer service is going to suffer and so undermine a key part of their current advantage.

The COO of Oaxaca has reached out to us to see if there is some way we can help them mitigate this issue by reducing the staffing and/or training needs of their restaurants with technology. Our goal is to look at their existing processes and identify ways in which we can use technology to help them grow faster.

We've identified one particular area of the business that requires a lot of staffing and training: waiting tables. Waiting staff at Oaxaca are responsible for:

- * welcoming and seating customers.**
- * taking customers' orders when they are ready.**
- * communicating customer orders to the kitchen staff.**
- * serving meals to customers once prepared by the kitchen staff.**
- * checking up on customers during their meal to identify and solve any issues.**
- * identifying when customers are finished, providing them with a bill and taking payment.**
- * cleaning up after customers have eaten.**

The parts that require the most training are:

- * learning the menu.**
- * talking to customers.**
- * efficiently communicate with kitchen staff.**
- * using the till to enter orders, produce bills and take payments.**
- * dealing with customer issues.**

We need to produce some software that reduces the need for hiring and training waiting staff while not reducing the level of customer care and attention that is a core part of Oaxaca's competitive advantage. This means that the software that we create needs to provide:

- * a fast, intuitive UI that someone doesn't need to be trained to use.**
- * accurate and complete data about relevant parts of the restaurant (no one will be happy if their orders are "lost").**
- * a secure (but not cumbersome) authentication system that prevents bad actors from capturing any customer data and tampering with restaurant data.**

The software will be tested in a single restaurant and, provided it successfully reduces the staffing needs and training time, it will be rolled out to all existing ones and all new restaurants opened after that. It is likely that as we test out the software that details we didn't consider at first will become apparent. We will discover that processes that appear simple now have more depth than we anticipated.