Dance Studio Placement in Atlanta, Georgia
An IBM Data Science Capstone Project

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Abstract

A dance studio is a business which provides the service of dance lessons, most often for school-age children. They have unique challenges which can be mitigated by carefully considering where to locate one. This report details the use of data science techniques and freely available data to answer the question, "What is the best place to start a new dance studio?"

More will be included in the abstract section as the progress is made

1 Introduction

1.1 Background

Dance studios are places where children, teenagers, and even adults can go to learn dance from qualified instructors. There are various kinds of dance studios that specialize in certain forms of dance like a ballet specific studio. Other studios may offer training in a variety of dance types and techniques.

Irrespective of the kind of dance focused on in the studio, a dance studio may choose to enter into dance competitions. Dance competitions are a means for studios to push their students to excel, they create a common goal and sense of loyalty among dancers, and winning competitions can boost a studio's reputation. However, because of costs, long practice hours, and logistics associated with competitions, studios may choose to forgo competitions and instead focus on recreational dance.

1.2 The Business Problem

Though the teaching and learning of dance is an athletic, artistic, and fulfilling endeavor, a dance studio is, at its heart, a business. Every business has unique challenges and needs, and dance studios are no exception. The needs of dance studios include, and are not limited to, competition with other studios for students, student retention, and finding qualified teachers. These needs and challenges necessitate that a potential studio director carefully choose the location for their studio. A good location can help to minimize some of the common issues that studios face.

While some needs like a good student base may be helped by obvious factors like being near public schools, other needs may be influenced by some non-obvious forces. A real issue studios face is student attrition. A somewhat hidden factor in the retention of students is the commitment of parents. Parents need to be on board in order to insure students stick around, because they are likely paying for the lessons and providing transportation. Some locations may provide benefits for parents that will decrease the chances of students being pulled out of dance lessons. Among these bonus features could be close proximity to schools to minimize drive time for parents and as well as being located near shops or a grocery store so parents can run errands while their child is at dance.

A more complete list of issues and "bonus" features, explanations as to why they matter, as well as implications for a data science analysis, has been compiled in Table 1. This list was devised after an interview with a former dance studio Assistant-Director, so it is based on relevant, and real-world experience about what can make a significant impact on the success of dance studios. With all of these factors to consider, it may not be immediately obvious where the best place to start a new studio is. This report seeks to remove some of the difficulty in determining the best location for a new dance studio using data science techniques. Put succinctly, this analysis will seek to answer the question, "What is the best area to start a new dance studio?"

Issue/Bonus	Explanation	Model Implication
Competition with other studios	Two similar studios located too near each other could start competing for students which is obviously undesirable. It's best to be farther away from other studios if possible.	Maximize distance from existing studios
Student base	A dance studio needs a steady base of students. Most dance studios accept only students that are school-aged. Locating in an area near public schools insures there are plenty of potential students. It is also important to note that low-income families may not have the disposable income to sign their children up for dance lessons. Locating in an area with a higher average salaries and lower cost of living may increase student base.	Proximity to public schools; located in a more affluent area
Finding teachers	Finding qualified dance teachers can be made much easier by locating near a college or university. Often, such schools have dance majors or students who formerly danced in studios.	Proximity to colleges and universities
Parent convenience	Parents can have a lot of competing demands to balance. Locating a dance studio near public schools can help eliminate the need for a parent to pick their child up from school and drive across town to dance lessons. Locating the studio near to shops or a grocery store can allow parents to minimize the number of trips they make. They can get groceries or go out to eat while their child is at dance, and not have to worry about being late to pick their kid up.	Proximity to public schools, grocery stores.
Affordable performance venue	Recitals and performances give students a goal to work toward and help parents see the fruits of their financial and time investment. A recital can also help the studio raise funds, but that is only the case if the performance venue is relatively nearby and not too expensive to use.	Proximity to dedicated performance venues; colleges and universities

Table 1: A list of needs and bonus features, explanations about them, and implications they have on a data science model.

1.3 Interested Parties

This report is targeted to any person or persons interested in starting a dance studio. This report may be appealing to those interested in starting a dance studio because it does a lot of the heavy lifting involved in deciding what a good location might be. Namely, it avoids areas with existing dance studios, locates in areas with a good potential student base, and locates in areas where there might be more teachers available to hire. Obviously, personal preferences, financial limitations, and other factors will come into play when considering where to start a dance studio, and this report does not address all factors. Instead, the aim is to supply a potential studio owner with targeted regions that will support the basic needs of a new studio, and maybe even provide a slight edge over their competition.

The results of this report may be more optimal for those seeking to run a recreational dance studio, as competition studios may have additional needs that are not be considered here. Given that the author lives in Atlanta, Georgia, this report will focus on the greater Atlanta metropolitan area. Even with the given limitations, it still stands to reason that any current or potential studio directors in any area may also glean insights from this report.