Dissertation Project Idea

Playdate App for Dogs: Market analysis and potential solution.

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CONTENTS

1. Proposed Project Idea

This project aims to apply data science strategies/tools to analyse data from existing dog playdate (or similar) apps on Google Play Store and use insights thus gained to draft basic functional and/or non-functional requirements that a new app in this space should have to maximize its chances of profitable, wide, and sustained adoption.

2. Motivation

The dog is the most popular pet worldwide (2023 World Population Review, 2023). There exist studies that link living with pets to benefits like reduced anxiety during stressful times (LaMotte, 2020). This may be among factors that explain why so many of us around the world opt for animal companionship (Health for Animals, 2022) (Atitwa, 2018); and why, in the US, where data regarding pets is most abundant, studies observe an increase in pet ownership post pandemic. Here, pets related expenditure has increased and services like pet insurance is gaining popularity (Tilford, 2022). Worldwide, the pet market is booming with contribution from regions outside the US and Europe also on the rise (Kerwin, 2023).

More pet dogs however, mean more challenges associated with owning one. Figures from 2020 in the US, show 65% of dog-owning households harbouring one dog only (Megna, 2023). Properly caring for a dog is a big responsibility and is expensive. Hence, it's safe to assume that most global households with a pet dog, likely host a single canine resident. This can leave the pet lonely, especially, given the busy and complex lives that their humans lead. Dog parents are often unable to provide the mental, physical, and social simulation that their pet requires. Negligence and/or lack of socialization with other humans and dogs can lead to unwanted excited or depressed behaviour (excessive barking, separation anxiety, excessive sleeping, loss of appetite, etc) in pet dogs. Many such developments unfortunately, pave the way towards people abandoning their pooches (Tang, 2023) (Four Paws, 2023), (Victoria McEvoy, 2022).

To this end, a social networking app focused on providing a platform that can hook up dogs with potential play mates for free; thereby, enriching both their lives, and that of their owners, would be a great asset to the dog community.

A quick search in an app marketplace like Google Play Store, reveals similar apps that already exist. Most of these, however, are confined to cater towards users in countries with an already well-established pet care sector, like the US. Although data from these apps are available, there is a lack of published studies that have analysed associated statistics. Therefore, when it comes to creating a new app in this field, it is unclear as to what features are most appreciated and what design choices are best avoided. Leveraging data from multiple similar pet service apps on platforms like Google Play Store and gathering inference by employing latest data science methods including machine learning, is an excellent way to draft a new and improved dog playdate app.

Such an app that's tastefully built upon well informed decisions, can prove to be more useful and fulfilling, thereby attracting users towards it amongst competition. Today, with the pet care sector seeing growth in multiple parts of the world (Kerwin, 2023), such an app has potential to do well in many more regions with an up-and-coming pet care industry, as well.

Creating and maintaining an app like this is, however, most practical only when it can be profitable. Protecting best interests of dogs and their humans require keeping the core functionality of requesting and hosting playdates free. This means alternate monetization strategies need to be adopted for this app to be economically sustainable. Here too, the app will largely benefit from comprehensive market analysis prior to drafting a set of functional and non-functional requirements to best set it up for social as well as financial success.

Data science typically supports app development by helping developers understand user behaviour, diagnose latent issues, add smart features and present customized user experience

(Gupta, 2023). Reviews, ratings, and comments left by app users can be analysed using natural language processing techniques to get a better understanding of common themes and associated sentiments. App icon images may also be studied to determine what elements in them can attract attention that could potentially lead to an install. Other statistics such as whether the app contains ads/in app purchases and any user remarks on this, can help in determining the correct monetization strategy.

3. Data

Publicly available data like no. of installs, ratings, reviews, etc, of existing apps akin to the target app idea can be obtained from Google Play Store using a public python library, google-play-scraper in tandem with the Python3 programming language which has good data management and analytics capabilities.

Data so collected can be securely stored in the cloud using AWS or Google Cloud Platform.

Note: No confidential data is accessed. The above-mentioned library only returns data that gets displayed on the browser to every viewer when one searches for or clicks on an app on Google Play Store. Moreover, only review/comment body text shall be analysed. Username of those who post the reviews/comments are not stored.

4. Inspiration

Ideally, I'd like to pursue a dissertation project which is genuinely interesting and can be of value to others as well.

This idea sprung to mind when I was considering making a dog playdate app myself and found it hard to manually go over similar apps in the market to find out what's already out there, and how it might be improved.

I felt the need to create such an app since I, myself, have a pet dog who I'll be leaving behind with my middle-aged parents when I travel to Dublin for higher studies at TCD soon. He is an extremely sensitive Shih Tzu (breed) who has a history of separation related depression. With my parents being unable to engage with him in active play time like I do, I know he'll miss me dearly.

Thus, a dog play-date app that allows people with dogs to discover each other and set up play dates for their pooches is something I wish existed where I live so that my shy dog can have an opportunity to make new friends. There aren't many dog parks nearby and my dog is too shy to immediately start playing with unfamiliar dogs at a park. He forms friendships over multiple meetups. Although there are apps that offer day care services. This is usually charged per-day and more importantly, is not primarily focussed on fun-time/socialization for the pet. It's more like a babysitting service which can get very expensive.

I'd love for there to be a free option for pet dogs and their people to connect at one of their homes or a mutually agreed upon location just to have a great time. I'm sure others with a dog would also like this. I believe this should be free, as all parties involved are benefiting from their dogs finding new friends.

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