**Type of Contribution: POSTER**

**Mobile Application to Facilitate Quick and Efficient Charity Donations in Local Communities**

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**Introduction:**

The poster I wish to submit for LIDA 2018 revolves around a mobile application which allows members of a community to quickly and conveniently donate items to local charities in their area. Through an intuitive user interface, both donators and charities can quickly and seamlessly communicate details regarding items to be donated as well as suitable times for collection. The platform that the application is initially being developed for is iOS, with an aim to eventually create a cross-platform application for use across a variety of devices. Following further refinement and testing, I hope that this mobile application will serve its intended purpose of helping smaller charities to flourish in an age where the power of mobile applications continues to be seen in countless aspects of our everyday lives.

**Theoretical framework:**

The background and inspiration of my proposal fundamentally stemmed from considering two key ideas:

1. Our ability to leverage the power of mobile applications to make everyday processes more efficient.

2. A desire to apply the aforementioned idea to a community-based problem where the end product could help to create an improved, more convenient process than that which currently exists.

In this case, the community-based problem I observed was a decline in donations given to local charities in my town. If I observed this in my own community, I considered that such a problem may be prevalent in many communities throughout my country. As a student of computer science, I tried to think of ways I could use my skill set to tackle this issue and thus the idea of my project was created.

**Research questions:**

The key research questions which I hope to answer by creating this mobile application are:

* Do small charities observe an increase in donations after the application is made available to people in their local community?
* If an increase is observed, what percentage increase?
* If no increase is observed, why do they think this was?
* What are the most important factors to consider in order to ensure an app is accessible to all members of the community?

**Methodology:**

In order to effectively implement this application, I carried out a number of planning and design steps. Using the Sketch design toolkit, I drew out a plan for the layout of the app and how each different view would appear to the user. I considered what factors help to create an intuitive experience for the end user and tried to keep these ideas in mind when designing the user interface.

Following this, I turned my attention to how I would approach configuring the backend server for the application. After considering various options, I opted to use a Mobile Backend as a Service (MBaaS) provider, specifically Google’s Firebase. Using this, I could store data in a real-time database and upload images using Firebase Cloud Storage, as well as manage authentication, notifications, and general app analytics in one dedicated place.

Initially, the chosen development environment for the client-side part of the application is XCode, with coding being carried out in the Swift programming language.

**Expected Research Results:**

Following the planning, design, implementation and testing I have already carried out, I am optimistic that my application will encourage more donations to charities and help smaller charities to survive long into the future. I intend on carrying out a trial run of the app in my own town and then hope to maintain contact with the owners of different charities in order to gather feedback on whether the introduction of the app has helped them. After presenting my idea to various colleagues from different backgrounds, I am also hopeful that the app should attract interest from “donator” users who wish to test the functionality and efficiency of the application. When I am satisfied that enough testing has been carried out, I hope to release the app on the App Store and gather a larger set of feedback data from users in different locations.

**Discussion & Conclusion:**

I have thoroughly enjoyed the experience of planning, designing, and writing this application and I look forward to continuing to track its progress in different communities in the coming months. Working on this project has made me acutely aware of just how achievable it is to make a genuine difference in the real world through harnessing the power of effective technologies and I am excited to continue to develop and refine the product I have created.

**REFERENCES:**

Firebase: <https://firebase.google.com/products/>

Sketch: <https://www.sketchapp.com>

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