

# “UMMAH” APP TO HELP THE WESTERN MUSLIM COMMUNITY

By Tuba S. Abbasi

Advised by Dr. Smolinski

*Problem Statement – describes the problem or issue that will be addressed by this work.*

*Articulate your objectives without using jargon. This section should address the what, why, who, how, when, and where.*

I plan to develop an application called “Ummah<sup>1</sup>” that is primarily for the Muslim community. The application will allow the user to easily find Mosques, Halal<sup>2</sup> food restaurants, Halal grocery stores, and other venues of interest in his/her area—a task that is quite difficult in any Non-Muslim majority country. Perhaps the most unique functionalities of this app are (1) Mosques, restaurants, and venues all over the U.S. (initially), will be able to claim their business/organization and be listed on the app; (2) The users will have the ability to subscribe to any Mosques in the area in which they live, or frequently visit. Once they do so, they will be able to get updates on the prayer times, events, announcements, etc.

The application that I seek to develop is a version of a directory app similar to Yelp. Specifically, the similarity lies in Yelp’s functionality to allow users to search for places of interest based on location. Likewise, my application will list the points of interest that are relevant to the Muslim community (based on location) and give the user information about those specific points of interest, such as Sect and prayer times of a Mosque, as well as rating, affordability, and delivery options for restaurants, etc.

According to a study conducted in 2015, the Muslim population makes up about 24% of the world’s overall population. In addition, out of the 195 countries in the world, there are about 50 countries that are known to be “Islamic” countries. This means that 74% of the countries are Non-Muslim majority. This is not surprising since the planet Earth is a diverse place. However, as an American Muslim myself, I have first handedly experienced and some of the problems the Muslim community faces while living in a Western or Non-Muslim majority country. This includes difficulty finding Mosques, or finding restaurants that serve food according to Islamic ways, etc., which forces Muslim individuals to utilize multiple online portals (such as Zabihah.com to find halal restaurants). Unfortunately, those are often outdated, which only leaves the option of trying tons of different wordings on Google in order to find a location of interest. This should not be the norm in 2018; not in the Muslim community and not in any other community. If there are areas that can be automated and distilled into a mobile application — a platform which accounts for over 50% of the web traffic — then there should be no hesitation in starting an implementation to make these users’ experience seamless.

Though this application can be applied in multiple areas, I want to primarily dedicate it to the Muslim community, as I am familiar with the issues my community faces as a minority in a Western world. Let us explore an example of a park — people will be able to search for parks, based on

1. Ummah: A common Arabic word which in literal translation **means** nation, people group, or community.
2. Halal: Meat prepared as prescribed by the Muslim law.

locations, and subscribe to their favorite park (or parks). This will help them keep up to date on any events taking place at that specific park. Similarly, this can be extended to churches, schools, and many other areas.

In my mobile application, there are two main types of users; the *Mosque owners* and the *Regular users* of the app. In my application, the Mosque owners will be able to claim their Mosque, and enter detailed information about that Mosque through a web-based portal/dashboard. In addition, they will be able to update prayer times, post events, and even make announcements through the portal. This content will show up on the front-end side on the mobile app for the Regular users. The Regular users will be able to enter a location in the mobile application, which will result in a list view of the Mosques in that area. The Regular user will then be able to “Subscribe” to any of the Mosques he/she wishes to follow. This will allow the Regular user to get any updates that the Mosque owner for that specific Mosque posts.

For the prototype, I will be delivering an iOS application for the Regular users and a web-based dashboard for the Mosque owners. This will be a native iOS app developed in Swift. In the future, the mobile app will be available to both the Android and the iOS platforms, though it will not be part of the prototype to be delivered on April 26<sup>th</sup>. Lastly, I will be utilizing the MEAN stack and implement the Firebase database.

Given the current deadline of April 26<sup>th</sup>, I will be delivering a minimal viable product (MVP) for this app. Though the concept and the scope of this app is quite large, I will focus only on the functionalities needed to get the idea across to the target audience. This means that I will only list Mosques on the app for now, and exclude the restaurant and grocery store listings. For timing purposes, I will only include the two local Mosques in Delaware, with which I am in contact, for the MVP. I plan on soliciting the two organizations’ feedback on the app I develop by mid-April in order to make any refinements to the app and share the future plans for it.

*Significance of Work – describes the extent to which this work affects, or is important to, the intended field or organization.*

A question that might come up is: “don’t most Mosques already have an app?” The answer is yes, they do, but they are painfully outdated! As these are nonprofit organizations, they cannot afford to pay a developer to maintain a mobile app developed specifically for the Mosque. So, what makes the existing apps for these organizations outdated? Most of these apps have faults in even the basic functionalities such as: regular crashes while using the app, lack of utilization of useful tools built into smart phones today, etc. For example, most of the existing apps for such organizations do not have push notifications, instead they are still sending out emails to their users for any updates or announcements. Although push notifications might seem like a minute example, it is a functionality that most smartphone users rely on and use on a daily basis! This forces Muslim users to rely on either emailing or calling the Mosque regarding events. Even on important holidays that are based on the Moon calendar, individuals usually have to call the Mosque to confirm the dates of the holiday, whereas receiving a simple push notification would have saved them the time.

One particular instance where this app might be extremely useful, and is actually the inspiration behind it, is when a Muslim individual either travels or moves. When the individual moves to a new place, or even temporarily travels through a new place, he/she does not know the area very well.

Usually, this means that he/she will turn to the internet to navigate through the new place. However, this is not as simple for a Muslim individual in a Non-Muslim majority country. Relying on Google often leads to the following problems: (1) When the individual searches for a Mosque in his/her area, he/she cannot always see to which Sect that Mosque belongs. This is an important factor for some people, as the method of prayer varies from Sect to Sect; (2) When the individual searches for Halal restaurants, rarely ever will he/she get the desired results. From my personal experience while touring the Bay Area in California, I noticed that there were many South Asian Halal restaurants. The surprising part however was that even in such a diverse area, searching for these restaurants online was quite a challenge. The keyword “Halal” usually had little to no effect on the search results, as it returned a list of Middle Eastern or South Asian restaurants regardless of whether they served Halal food or not. This means that these individuals almost always will have to call and ask the restaurants in advance prior to selecting them. As if deciding on a restaurant wasn’t already hard enough!

For the reasons defined above, developing an app as a service will be quite useful not only for the consumer who will be able to subscribe to various Mosques, but to the Mosque owners as well. Though each Mosque is different from one another, they all seek to share the same basic information, such as the Sect they belong to, prayer times, events, etc. Accordingly, why not develop an app once for all the Mosques then?

*Methodology – describes the systematic process that will help achieve the objectives of this work.*

Though my vision for this app is to have many Mosques around the U.S. to claim themselves, for my prototype, I will begin with the local Mosques with which I am familiar. By Feb. 8<sup>th</sup>, I plan on the discovery/planning/setup phase to be completed. Subsequently, I plan to have the UI UX developed for the mobile app completed by Feb. 12<sup>th</sup>. I will implement the app and web dashboard API’s by March 16<sup>th</sup>. After I ensure that the front-end is able to talk to the backend and vice versa, I will start the development for the mobile app. By March 22<sup>nd</sup>, I plan to have the basic functionality of the app completed. This includes the list view of relevant Mosques, push notifications, and location based searches. The final functionalities such as the user’s ability to “Subscribe” to a Mosque along with a map view of the search results would be implemented by April 2<sup>nd</sup>. At this point, I will be done with the major components of the application. This will allow me to have the consumers try out the app and get any feedback for refinements before the final presentation on April 26<sup>th</sup>.