Mind Health Network App

Team Kalolo | ESRI 2018 ECCE App Challenge

The following link will take you to the GitHub repository for this project: https://tinyurl.com/ydamar5w

Mission Statement

Mental illness is exceptionally common in Canada, with 1 in 5 Canadians experiencing a mental issue every year.[1] Such illnesses predominantly affect adolescents between 15-24, with about a quarter of such individuals taking their own lives.[2] In the majority of such cases, assistance from health professionals and community-based services can have profound benefits on those suffering from mental health conditions. Yet roughly 75% of the individuals affected have not visited such services.[3] This is principally due to the confusing nature of the mental health services available to individuals in Ontario, with many unsure where to begin searching for help, where to go for a particular type of problem, and what types of services are available to them.

It is of paramount importance to simplify the process of seeking and receiving mental health support in Canada's most populated city. A free and open service that informs members of the public, especially vulnerable youths, of local mental health services in an accessible and intuitive manner will build effective support networks for those in need. However, as it stands, there is no centralized platform that provides such information. Furthermore, there are no services that categorize a given facility by urgency of the demand (e.g simply seeking information or requiring urgent care) or provide valuable and consistent feedback on the performance of facilities, facility staff, and overall patient satisfaction of the treatments received.

Our application seeks to satisfy these needs by alleviating the burdens of untreated mental illnesses. Mind Health Network provides the public a centralized means of locating mental health services in close proximity to the downtown Toronto core, as well as organizing such locations by urgency. Furthermore, we allow users to rate the quality of their experiences with a service utilizing a short, 12 question Survey123 form embedded in our application. We hope that this application can be scaled to the provincial level, and even the national level in the future, to extend our platform and mission for a more integrated system of mental health support.

Our Goals

The Mind Health Network app strives to connect the citizens of Central Toronto to the medical and mental health establishments that best suit their needs, when they need it. To this end, the three main objectives we hope to fulfill are as follows:

1.) To improve awareness and promote public education of existing types of mental health facilities, professionals, and services in central Toronto, depending on the urgency level of their mental health condition(s)

2.) To connect Torontonians to an extensive network of available mental health professionals and services in the downtown core of the city (encompassing 8 adjacent wards)

3.) To provides users with an anonymous platform to inform one another of the quality of a given healthcare service through the completion of a 12-question, 123 Survey

Using the Mind Health Network App

Preamble

With the Mind Health Network app, we hope to bring an easy, clear, and intuitive navigation system and community-building enterprise with calming visual aesthetics. Users can easily find the services they are looking for alongside all relevant information by the selected urgency of their mental health needs. We designed the Mind Mental Network in such a way as to require very little time for any user to master, especially with our extensive *About* and *How To Widget* documentation and customized, user-friendly tool icons embedded in the application.

The Mind Health Network utilizes ArcGIS Web AppBuilder to build an accessible platform for users from all walks of life.

Steps to Use the App

Accessing the App
View the live web app by clicking on the following the link: https://arcg.is/1ubq55
View a video demoing how to work with the app here: https://youtu.be/wn_w3Duw07k

How-To Documentation
When users first open the Mind Health Network app, they will be greeted by a friendly interface and the unfurled About widget panel on the right. Users may scroll down the panel to read more about the urgency level parameters that help identify their specific type of mental health needs.

The About widget panel will also include a link to the optional 12 question 123 Survey, which helps to gauge community comments on the quality of mental health services used. There is also another link to the completely confidential and anonymous results of the community-collected information on said mental health services to provide future reference for interested patients or medical providers. Users may also click on the How-To widget, which is located next to the About widget, to learn more about the functionality of each of the tools they can use in this app.

Search for Mental Health Services by Urgency Level
With the search widget, users can filter the service they're looking for by urgency level (Need Help, Need Support, Need Information), the type of service (e.g. Pharmacy, Community Centre etc.) in the provided dropdowns and type in the available days you want to the visit the services. After submitting their search criteria, the interactive results pane will display a list of relevant

locations that meet users' requirements, and allow users to zoom in and view detailed information on a location-by-location basis.

Search for Mental Health Services Near You

Using a slightly modified version of the Near Me widget, users can find locations within a specified radius (1-5 kilometers) of their current location. Users can edit such distances as they desire using an interactive slider and then see a drop-down of all the locations that meet the specified distance criteria.

Find Directions to Your Chosen Mental Health Facility

Using the directions, or Where To, widget, a user can specify an origin and destination for a trip, such as to a mental health service. Users may then choose a mode of transportation (car or walking) and time or distance impedance parameters to create a shortest route path between these two points. As well, users have the option to insert waypoints with the add dialog to factor in brief stops toward their final destination.

Navigating the Mental Facilities Layers and Sharing!

If a user desires to look at all available, top-rated mental health facilities in Central Toronto, they may click on the Layer List widget and toggle on and off the different types of mental health services available in the region. Users may also look to the Legend widget to distinguish between different types of mental health providers, facilities, and services that are available for viewing on the Mind Health Network application. After users have selected their options, or displayed the different facilities of interest in Central Toronto, they may choose to share their selected contents or refer this app's services to their network of families and friends via email, Google+, Facebook, and / or Twitter.

Data Sources

App Development

The Mind Health Network relies on only free and open data sources that are available online for public use, such as:

1. www.ementalhealth.ca
2. www.ratemd.com
3. www.torontocentralhealthline.ca
4. www.yelp.ca/toronto
5. www.yellowpages.ca/search/si/1/Telephone+Directories/Toronto+ON
6. www.ontario.ca/search/data-catalogue
7. www.toronto.ca/city-government/data-research-maps/open-data/
8. www.211toronto.ca

The primary sources of information on pharmacies and other healthcare facilities, such as emergency departments and crisis centres, were taken from the City of Toronto and Province of Ontario's open databases, as listed above.

Further information on the top-10 or most popular psychologists, therapists / psychotherapists, psychiatrists, family doctors, private and public clinical practices, and community groups were taken from free and open resources available online. We wanted Mind Health Network to feature feedback from the Toronto community, so we took into consideration the comments and reviews of the wider public, such as from Yelp and RateMD, on reliable and effective mental health clinics and practices in the downtown core of the city.

The locations of mental health facilities and clinical practices in the Mind Health Network, which did not come from the Province of Ontario and City of Toronto's open databases, have been geocoded from the addresses listed in the above sites with the latest version of ArcGIS PRO.

Video Development

PACIFIC SUN by Nicolai Heidlas Music https://soundcloud.com/nicolai-heidlas Creative Commons — Attribution 3.0 Unported— CC BY 3.0 http://creativecommons.org/licenses/b... Music promoted by Audio Library https://youtu.be/kbqmEJTr3nU

Limitations

Mind Health Network strives to include all relevant information on mental health support groups, facilities, professionals, and services in the downtown region of Toronto. However, there are certain caveats to using the Mind Health Network for users to consider:

1. Due to an open data constraint and irregular update schedules, all the data included in the app's database is current only up to 2016

2. The Mind Health Network database covers only 8 Central Toronto wards and thus may not fully represent all the mental health services in the city that fall out of the predefined boundaries

3. The 123 survey is provided as an optional service, and the results will vary as they depend on the subjective experiences of the users who choose to fill out the survey

Despite these limitations, we hope that Mind Health Network will provide exceptional service for Torontonians as a pilot project, which may in the future be used to assist a multitude other cities and towns that lack an integrated system of mental health support networks for their inhabitants.

References

1. Smetanin et al. (2011). The life and economic impact of major mental illnesses in Canada: 2011-2041. Prepared for the Mental Health Commission of Canada. Toronto: RiskAnalytica.

2. Pearson, Janz and Ali (2013). Health at a glance: Mental and substance use disorders in Canada. Statistics Canada Catalogue no. 82-624-X.

3. Waddell et al. (2005). A public health strategy to improve the mental health of Canadian children.Canadian Journal of Psychiatry, 50: 226-33.