## Coustomer Journey

The concept of customer journeys has been used, at least since the early nineties, to describe services from the customer's point of view (Whittle & Foster, 1991). Nevertheless, the literature on customer journeys is still in its emergence, though some key works (Parker & Heapy, 2006; Voss & Zomerdijk, 2007) have made a marked impression on the field. As of yet, we have not reached a point of stable definitions and uses of key terminology associated with customer journeys (Følstad et al., 2013). In the literature, a customer journey is seen as the process that a customer goes through to reach a specific goal, that involves one or more service providers (Følstad et al. 2013). Customer journeys are typically detailed as a series of touchpoints or interactions between the customer and the service providers (for example, Clatworthy, 2011; Stickdorn & Zehrer, 2009). The importance of a customer journey perspective increases as the complexity in service provisioning increases, for example, when services involve multiple touchpoints for which different organizational units are responsible

A framework for involvement practices within the customer journey approach

The variety in the emerging involvement practices within the customer journey approach may be confusing. To improve our understanding of these practices, and thereby support their further evolvement, we suggest a simple framework as a structure against which to map current and future practices. In this framework, we structure involvement practices according to three main dimensions: Purposes, implementations, and output. The purpose concerns the objective of the involvement practice. The implementation concerns its practical arrangement, in particular in the form of participants and methods. The framework is presented in Table 1. The purposes of involvement practices may broadly be distinguished as concerning analysis and design. Analysis practices include mapping and measurement. Co-design practices may or may not be associated with analysis. ServDes. 2014 Fourth Service Design and Innovation conference The implementations of involvement practices concern participants and methods. Within the customer journey approach, emerging involvement practices target customers, internal resources, or both. The methods used for involvement of customers and internal resources include qualitative methods for mapping or co-design, and quantitative methods for measurement. The qualitative methods may target individuals, such as interviews and observations, or a collaborative setting, such as the workshops for mapping or co-design. The output of involvement practices depends on their purpose and implementation
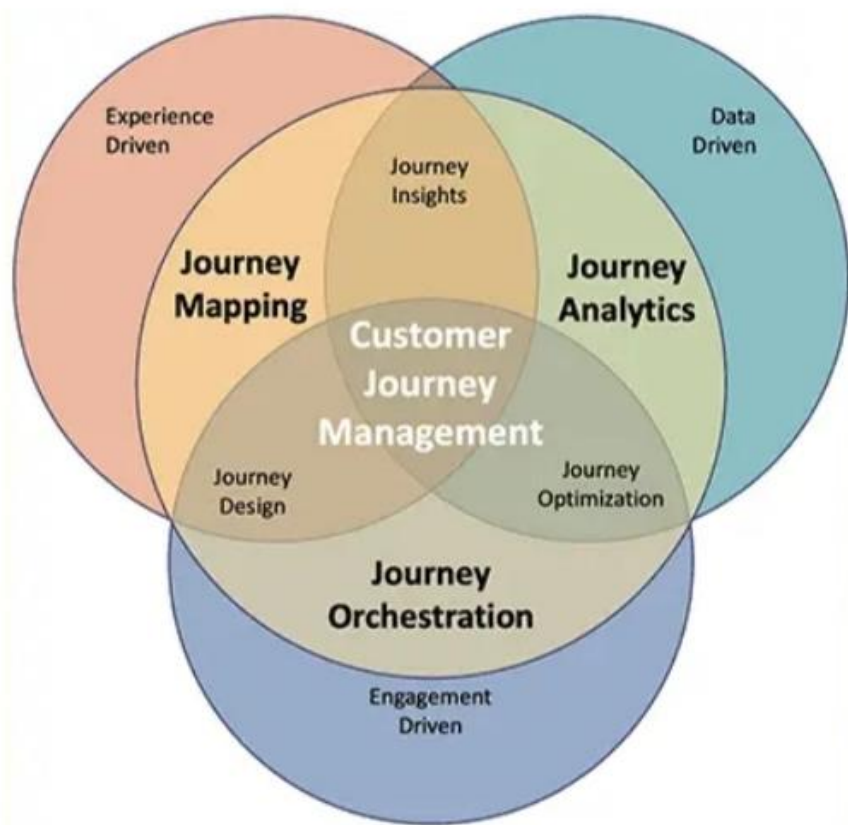
Functional Requirements

The objec4ve of the APP STOP COVID19 CAT and the COVID19Xat is to offer the user a self assessment test on the symptoms of COVID-19. In this way, the user provides informa4on about the symptomatology and receives advice depending on the result. In case of a possible COVID-19 case, the digital tools store the ci4zen's data in order for the health services to be able to monitor his/her progress. The health services will assess the need to re-classify, monitor, or alert the emergency services in case they're needed.

Data:

The STOPCOVID19 and COVID19Xat tools are voluntary tools. As it is described later on, both tools require the Personal Iden4fica4on Code (CIP), which is a code that can be

found on any Individual Health Card. Alterna4vely, the user can provide their ID or Passport. List of recorded data:

1. Iden4fica4on data: CIP, ID or Passport.

2. Contact details: telephone number and/or address and alterna4ve telephone number.

3. Health data: the user's answers about the symptomatology.

4. Loca4on data: the longitude and la4tude coordinates of the loca4on from where the user is answering the test, data obtained automa4cally with the user's prior consent (through the same APP or the browser in case of Chatbot).

Geolocalisation

With the objec4ve of facilita4ng healthcare in rela4on to the evolu4on of COVID-19, the use of localisa4on and iden4fica4on tools are necessary within the app and Chatbot. The geolocalisa4on tools used are the following: App: the app geolocates the loca4on of the user through the handset (once the user has accepted to ac4vate the localisa4on services). Chatbot: The chatbot geolocates the loca4on of the user through the acceptance of the geolocalisa4on op4on in the browser. The informa4on provided by these systems is relevant in case emergency services need to be alerted and is also important for eventual test deliveries or other necessary health materials to ci4zens' homes. Geolocalisa4on also allows for the crea4on of a heat map that iden4fies the areas with a greater density of cases, so the resources available can be assigned according to the necessi4es of each area or areaspecific containment measures can be adopted.

Case of usage: The Coronavirus SARS CoV-2 symptoms monitoring and tracing Test works as follows: It outlines four ini4al ques4ons that allow the iden4fica4on of users' symptoms that indicate the need to complete the self-assessment test. The ques4ons are: a. Do you have a fever? b. Do you suffer from shortness of breath c. Do you have a persistent cough? d. Do you have a sense of general unrest? If the user answers NO to ALL of the ques4ons above, it will not be necessary to con4nue with the test. The person is considered to be asymptoma4c and they will be referred to the protec4on measures and health advice that can be found in the official informa4on sources. If the user answers YES to one of the ques4ons above, it will be necessary to con4nue with the self-assessment test to iden4fy more details:

a. Age and gender

b. Illnesses or basic details that allow to iden4fy the poten4al risk of the user

c. Specific symptoms:

i. Exacttemperature

ii. Level of discomfort (in a scale of 1 to 4)

iii. Level of shortness of breath (in a scale of 1 to 4) 6

d. Current condi4on, specifying whether or not the user is experiencing difficul4es to carry out ordinary ac4vi4es (taking a shower, gemng up, ea4ng, etc.) With the combina4on of

the symptoms, the risks, the current condi4on and the age of the user, the algorithm bounded to the test establishes a classifica4on of the cases according to the following criteria:

Level 1: Severe symptoms and associated risk: The emergency services are alerted. The emergency services contact the user for monitoring purposes and ac4vate the resources if needed.

Level 2: Severe symptoms but no associated risk: The user is urged to stay home and to self-assess the symptoms experienced twice a day during 14 days. The case is reported to the primary care services, which will aid with the monitoring.

Level 3: Mild symptoms and associated risk: The user is urged to stay home and to self-assess the symptoms experienced twice a day during 14 days. The case is reported to the primary care services, which will aid with the monitoring

 Level 4: Severe symptoms and no associated risk: The user is urged to stay home and to self-assess the symptoms experienced twice a day during 14 days. The case is reported to the primary care services.

Data flow diagram

A data flow diagram is a way of representing a flow of data through a process or a system.The DFD also provides information about the outputs and inputs of each entity and the process itself.A data flow diagram has no control flow there are no decision rules and no loops. DFD A data flow diagram is a graphical or visual representation using a standardized set of symbols and notations to describe a business operations through data movement Symbols and notations are used in DFS DFD notations and symbols vary employed. Some organisation have adopted their own conventions ,though this is not recommended

 • Gane and sarson

• Yourdon and De Marco

 • SSADM

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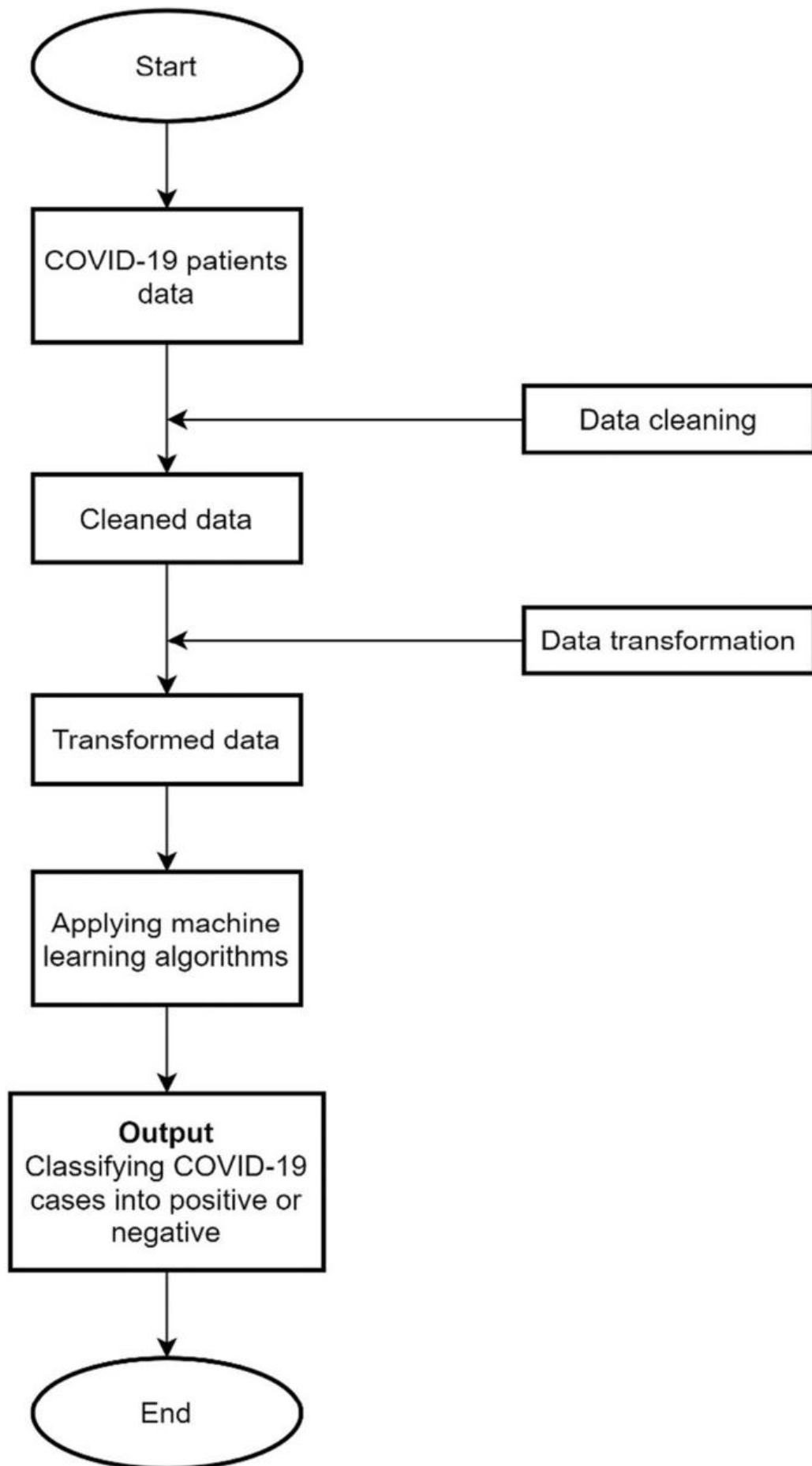
Technology Architecture

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