

I. Use Case Description	
Use Case Name	<i>Explainable Health Assistants</i>
Use Case Identifier	<i>XAI Health Assistant</i>
Source	<i>Rensselaer Polytechnic Institute and IBM Research</i>
Point of Contact	<i>Shruthi Chari, charis@rpi.edu</i>
Creation / Revision Date	<i>12/2/2019</i>
Associated Documents	<i>Requirements documentation, traceability matrix if applicable</i>

II. Use Case Summary	
Goal	<i>Describe briefly the goal the use case is intended to satisfy</i>
Requirements	<i>State any requirement(s) specific to this use case, including any capabilities from a business architecture or process model that the use case supports, any metrics or other reporting requirements, etc., including any reference identifier for the requirement(s), as applicable</i>
Scope	<i>Identify any known boundaries and the intended scope of the use case</i>
Priority	<i>Identify the priority of the use case (with respect to other use cases for the project)</i>
Stakeholders	<i>Identify all known stakeholders for the use case</i>
Description	<i>Summarize the use case, capturing the essential objectives (no longer than a page), including a quick overview, restated goals, and principal actor(s).  User stories, if applicable, and any narrative mapped from those user stories to usage scenarios should be included in the Usage Scenarios section, below.</i>
Actors / Interfaces	<i>List actors: people, systems, knowledge bases, repositories, and other data resources, services, sensors, or other “things” outside the system that either act on the system (primary actors) or are acted on by the system (secondary actors). Primary actors are those that invoke the use case and benefit from the result. Identify the primary actor and briefly describe role.  Any actor that is external to or outside the control of the use case owner should be further described under Resources, below.</i>
Pre-conditions	<i>Identify any assumptions about the state of the system that must be met for the trigger (below) to initiate the use case. Any assumptions about the state of other related systems can also be stated here. List all preconditions.</i>
Post-conditions	<i>Provide any conditions that will be true of the state of the system after the use case has been completed.</i>
Triggers	<i>Describe in detail the event or events that initiate the execution of this use case. Triggers can be external, temporal, or internal. They can be single events or a complex event that indicates that some set of conditions has been met.</i>
Performance Requirements	<i>List any known performance-specific requirements – timing and sizing (volume, frequency, etc.), maintainability, reusability, other “-ilities”, etc.</i>
Assumptions	
Open Issues	

### III. Usage Scenarios

*Provide at least two usage scenarios that flesh out the requirements outlined in the summary, including identification of requirements specific to any envisioned ontology or semantically-driven service or application. Scenarios should be described as narrative, with supporting diagrams as appropriate. In an*

Agile process, every user story relevant to the use case should be included and elaborated/rolled up into one or more usage scenarios, with a clear mapping from the user story to the scenario it is integrated in or mapped to.

#### IV. Basic Flow of Events

Narrative: Often referred to as the primary scenario or course of events, the basic flow defines the process/data/work flow that would be followed if the use case were to follow its main plot from start to end. Error states or alternate states that might occur as a matter of course in fulfilling the use case should be included under Alternate Flow of Events, below. The basic flow should provide any reviewer a quick overview of how an implementation is intended to work. A summary paragraph should be included that provides such an overview (which can include lists, conversational analysis that captures stakeholder interview information, etc.), followed by more detail expressed via the table structure.

In cases where the user scenarios are sufficiently different from one another, it may be helpful to describe the flow for each scenario independently, and then merge them together in a composite flow.

Basic / Normal Flow of Events			
Step	Actor (Person)	Actor (System)	Description

#### V. Alternate Flow of Events

Narrative: The alternate flow defines the process/data/work flow that would be followed if the use case enters an error or alternate state from the basic flow defined, above. A summary paragraph should be included that provides an overview of each alternate flow, followed by more detail expressed via the table structure.

Alternate Flow of Events			
Step	Actor (Person)	Actor (System)	Description

#### VI. Use Case and Activity Diagram(s)

Provide the primary use case diagram, including actors, and a high-level activity diagram to show the flow of primary events that include/surround the use case. Subordinate diagrams that map the flow for each usage scenario should be included as appropriate

#### VII. Competency Questions

Provide at least 2 competency questions that you will ask of the vocabulary/ontology/knowledge base to implement this use case, including example answers to the questions.

Describe at least one way you expect to use the semantics and/or provenance to propose an answer to the

questions. Include an initial description of why the semantics and/or provenance representation and reasoning provides an advantage over other obvious approaches to the problem. (optional – depending on the use case and need for supporting business case).

## VIII. Resources

In order to support the capabilities described in this Use Case, a set of resources must be available and/or configured. These resources include the set of actors listed above, with additional detail, and any other ancillary systems, sensors, or services that are relevant to the problem/use case.

### Knowledge Bases, Repositories, or other Data Sources

Data	Type	Characteristics	Description	Owner	Source	Access Policies & Usage
<i>(dataset or repository name)</i>	<i>(remote, local/in situ, etc.)</i>	<i>e.g. – no cloud cover</i>	<i>Short description of the dataset, possibly including rationale of the usage characteristics</i>		<i>Source (possibly a system, or remote site) for discovery and access</i>	

### External Ontologies, Vocabularies, or other Model Services

Resource	Language	Description	Owner	Source	Describes/Uses	Access Policies & Usage
<i>(ontology, vocabulary, or model name)</i>	<i>(ontology language and syntactic form, e.g., RDFS - N3)</i>	<i>If the service is one that runs a given ontology or model-based application at a given frequency, state that in addition to the basic description</i>		<i>Source (link to the registry or directly to the ontology, vocabulary, or model where that model is maintained, if available)</i>	<i>List of one or more data sources described by and/or used by the model</i>	

**Other Resources, Service, or Triggers** (e.g., event notification services, application services, etc.)

Resource	Type	Description	Owner	Source	Access Policies & Usage

<i>(sensor or external service name)</i>		<i>Include a description of the resource as well as availability, if applicable</i>	<i>Primary owner of the service</i>	<i>Application or service URL; if subscription based, include subscription and any subscription owner</i>	

## **IX. References and Bibliography**

*List all reference documents – policy documents, regulations, standards, de-facto standards, glossaries, dictionaries and thesauri, taxonomies, and any other reference materials considered relevant to the use case*

## **X. Notes**

*There is always some piece of information that is required that has no other place to go. This is the place for that information.*