

Hamsa Survey's doc

version

Bruno Ferraz

August 28, 2020

Contents

Welcome to Hamsa Survey's documentation!	1
hamsa	1
hamsa package	1
Submodules	1
hamsa.heuristics module	1
hamsa.instance module	1
hamsa.question module	1
hamsa.survey module	3
Module contents	6
Indices and tables	6
Index	7
Python Module Index	9

Welcome to Hamsa Survey's documentation!

hamsa

hamsa package

Submodules

hamsa.heuristics module

This module is used to store all heuristics values as constants.

constant int THRESHOLD_UNIQUE: Threshold used to identify opened questions. If you have more unique answers than the THRESHOLD_UNIQUE probably you have a opened question. The threshold is expressed in percent.

```
hamsa.heuristics.THRESHOLD_UNIQUE = 50
```

Constant int THRESHOLD_UNIQUE_MULTI_CHOICE: Threshold used to identify multiple choice questions from closed ones

hamsa.instance module

```
class hamsa.instance.IInstance
```

Bases: **object**

Interface to define classes to hold and navigate through reference to surveys entries

abstract get_answer (columnIndex)

abstract get_answers ()

abstract get_question (columnIndex)

abstract get_question_heading (columnIndex)

```
class hamsa.instance.Instance (surveyParam, rowIndex: int)
```

Bases: **hamsa.instance.IInstance**

get_answer ()

get_answers ()

get_question ()

get_question_heading ()

hamsa.question module

```
class hamsa.question.IQuestionType
```

Bases: **object**

Interface to define the methods used to decode answers from string base. The behavior used to this processed will change due to the question type. This abstraction works like a Type for the question.

abstract pre_process ()

Welcome to Hamsa Survey's documentation!

abstract `get_answers ()`

abstract `get_answers_encoded ()`

abstract `get_categories ()`

`class hamsa.question.QuestionType (value)`

Bases: `enum.Enum`

An enumeration.

`UNKNOWN = 0`

`OPENED = 1`

`CLOSED = 2`

`CLOSED_MULTIPLE_CHOICE = 3`

`CLOSED_CHECKBOX = 4`

`class hamsa.question.IQuestion`

Bases: `object`

Public Methods

abstract `get_id ()` → int

abstract `get_label ()`

abstract `get_heading (i: int)`

abstract `get_type ()`

abstract `get_categories ()`

abstract `get_type_string ()`

abstract `get_raw_answers (i: int)`

abstract `get_answers_encoded ()`

abstract `get_state ()`

abstract `set_state (state: bool)`

abstract `change_type ()`

`class hamsa.question.ConcreteQuestionsType (q)`

Bases: `hamsa.question.IQuestionType`

`pre_process ()`

`get_answers ()`

`get_categories ()`

`get_answers_encoded ()`

`class hamsa.question.OpenEndedType (q)`

Bases: `hamsa.question.ConcreteQuestionsType`

`get_answers ()`

Welcome to Hamsa Survey's documentation!

```
class hamsa.question.ClosedEndedType (q)
```

Bases: `hamsa.question.ConcreteQuestionsType`

```
get_answers ()
```

```
class hamsa.question.ClosedEndedMultipleChoiceType (q)
```

Bases: `hamsa.question.ClosedEndedType`

```
pre_process ()
```

```
get_answers ()
```

```
get_answers_encoded ()
```

```
get_categories ()
```

```
class hamsa.question.Question (surveyParam, columnIndex: int, questionLabel: str)
```

Bases: `hamsa.question.IQuestion`

```
get_id ()
```

```
get_label ()
```

```
get_heading ()
```

```
get_type ()
```

Method to get the question type

Return Enum that indicate the type. Must be decoded
QuestionType:

```
get_type_string ()
```

Method to get the question type already decoded into string

Return str: QuestionType enum decoded

```
get_raw_answers ()
```

```
get_answers_encoded ()
```

```
get_categories ()
```

```
get_state ()
```

Get the question state If True, it will be exported If False, it will not be exported

```
set_state (state: bool)
```

Set the question state. If it join the export or not

```
change_type (questionTypeParam: hamsa.question.QuestionType)
```

Method used to change question type. It already invoke the the private method `_create_type`. There, the state will be created since it have not been created already

Parameters: `questionTypeParam` ([QuestionType](#)) – Type of question you want to change into.

hamsa.survey module

```
class hamsa.survey.ISurvey
```

Bases: `object`

Interface works as a FAÇADE for hamsa survey system. Futhermore, also works as MODEL from MVC pattern

```
abstract pre_process ()

abstract get_question (i: int)

abstract get_question_heading (i: int)

abstract get_questions () → list

abstract get_questions_headings () → list

abstract get_questions_labels () → list

abstract get_questions_states () → list

abstract get_questions_categories () → list

get_questions_types () → list

abstract get_questions_by_type () → list

abstract get_questions_by_state () → list

abstract get_instance (i: int)

abstract get_answer (i: int, j: int)

abstract get_question_raw_answers (columnParam: int)

abstract get_instance_raw_answers (rowindex: int)

abstract get_report ()

abstract get_report_data ()

abstract export_to_matlab (path)
```

```
class hamsa.survey.Survey (df)
  Bases: hamsa.survey.ISurvey
  Data Structure that stores information about how data will be exported to neural network
```

```
pre_process ()
  Pre-process the data provided figuring out the questions type
```

```
get_question (index)
  Get a Question object from the pre-processed list

  Parameters:   index – Question's index position
  Return       Question object referenced by index
  Question:
```

```
get_question_heading (index)
  Get specific question's heading referenced by the index

  Parameters:   index (int) – Index position that
```

```
get_questions () → list
  Get a list of pre-processed question

  Return list:   Questions pre-processed
```

```
get_questions_headings () → list
```


Welcome to Hamsa Survey's documentation!

Get a list with question's headings

Return list: Question's Headings

get_questions_states () → list

get_questions_categories () → list

Get a list of lists from the question's categories. If the question is opened the request will be None

get_questions_by_type (typewanted: [hamsa.question.QuestionType](#)) → list

Get a list of questions filtered by type

Parameters: typewanted ([QuestionType](#)) –

Return list: Questions filtered by given type

get_questions_by_state (statewanted: bool) → list

Get a list of questions filtered by state

Parameters: statewanted (bool) – True means enabled False means disable

Return list: Questions filtered by given state

get_questions_labels () → list

get_questions_types () → list

get_instance (rowindex)

Get a Instance object from the list

**Return
Instance:**

get_answer (lineParam, columnParam)

Get an specific an answer from a specific question

Parameters:

• **lineParam** (int) – line requested

• **columnParam** (int) – column requested

Return str: Answer requested

get_question_raw_answers (columnParam) → pandas.core.series.Series

Get answers from a specific question

Parameters: columnParam (int) – column requested

Return answers organized in a pandas.Series

pandas.Series:

get_instance_raw_answers (rowindex)

Get answers from a specific instance

Parameters: rowindex (int) – index requested

Return list: answers organizes in a list

get_report ()

Generate statistics based on the data provided and return it as a string

Return str: report string

get_report_data ()

Return data to be used in Report screen

export_to_matlab (path)

Module contents

`hamsa.read_csv` (path=None, token=',', encoding='utf8') → [hamsa.survey.Survey](#)

Reads a CSV file

Parameters:

- **path** (*str*) – indicates the file and the path to it
- **token** (*str*) – token used to split the a file along the parsing step. The default is “,” but “;” or “/t” are largely used instead. Opened questions demands diferent tokens since the interviewed could write anything.
- **encoding** (*str*) – assign which encoding must be used along the parsing step. The default is UTF8

Return The object Survey

survey.Survey:

Indices and tables

- [genindex](#)
- [modindex](#)
- [search](#)

Index

C

`change_type()` (hamsa.question.IQuestion method)
(hamsa.question.Question method)
`CLOSED` (hamsa.question.QuestionType attribute)
`CLOSED_CHECKBOX` (hamsa.question.QuestionType attribute)
`CLOSED_MULTIPLE_CHOICE`
(hamsa.question.QuestionType attribute)
`ClosedEndedMultipleChoiceType` (class in hamsa.question)
`ClosedEndedType` (class in hamsa.question)
`ConcreteQuestionsType` (class in hamsa.question)

E

`export_to_matlab()` (hamsa.survey.ISurvey method)
(hamsa.survey.Survey method)

G

`get_answer()` (hamsa.instance.IInstance method)
(hamsa.instance.Instance method)
(hamsa.survey.ISurvey method)
(hamsa.survey.Survey method)
`get_answers()` (hamsa.instance.IInstance method)
(hamsa.instance.Instance method)
(hamsa.question.ClosedEndedMultipleChoiceType method)
(hamsa.question.ClosedEndedType method)
(hamsa.question.ConcreteQuestionsType method)
(hamsa.question.IQuestionType method)
(hamsa.question.OpenEndedType method)
`get_answers_encoded()`
(hamsa.question.ClosedEndedMultipleChoiceType method)
(hamsa.question.ConcreteQuestionsType method)
(hamsa.question.IQuestion method)
(hamsa.question.IQuestionType method)
(hamsa.question.Question method)
`get_categories()`
(hamsa.question.ClosedEndedMultipleChoiceType method)
(hamsa.question.ConcreteQuestionsType method)
(hamsa.question.IQuestion method)
(hamsa.question.IQuestionType method)

(hamsa.question.Question method)
`get_heading()` (hamsa.question.IQuestion method)
(hamsa.question.Question method)
`get_id()` (hamsa.question.IQuestion method)
(hamsa.question.Question method)
`get_instance()` (hamsa.survey.ISurvey method)
(hamsa.survey.Survey method)
`get_instance_raw_answers()` (hamsa.survey.ISurvey method)
(hamsa.survey.Survey method)
`get_label()` (hamsa.question.IQuestion method)
(hamsa.question.Question method)
`get_question()` (hamsa.instance.IInstance method)
(hamsa.instance.Instance method)
(hamsa.survey.ISurvey method)
(hamsa.survey.Survey method)
`get_question_heading()` (hamsa.instance.IInstance method)
(hamsa.instance.Instance method)
(hamsa.survey.ISurvey method)
(hamsa.survey.Survey method)
`get_question_raw_answers()` (hamsa.survey.ISurvey method)
(hamsa.survey.Survey method)
`get_questions()` (hamsa.survey.ISurvey method)
(hamsa.survey.Survey method)
`get_questions_by_state()` (hamsa.survey.ISurvey method)
(hamsa.survey.Survey method)
`get_questions_by_type()` (hamsa.survey.ISurvey method)
(hamsa.survey.Survey method)
`get_questions_categories()` (hamsa.survey.ISurvey method)
(hamsa.survey.Survey method)
`get_questions_headings()` (hamsa.survey.ISurvey method)
(hamsa.survey.Survey method)
`get_questions_labels()` (hamsa.survey.ISurvey method)
(hamsa.survey.Survey method)
`get_questions_states()` (hamsa.survey.ISurvey method)
(hamsa.survey.Survey method)
`get_questions_types()` (hamsa.survey.ISurvey method)
(hamsa.survey.Survey method)

`get_raw_answers()` (hamsa.question.IQuestion method)
(hamsa.question.Question method)
`get_report()` (hamsa.survey.ISurvey method)
(hamsa.survey.Survey method)
`get_report_data()` (hamsa.survey.ISurvey method)
(hamsa.survey.Survey method)
`get_state()` (hamsa.question.IQuestion method)
(hamsa.question.Question method)
`get_type()` (hamsa.question.IQuestion method)
(hamsa.question.Question method)
`get_type_string()` (hamsa.question.IQuestion method)
(hamsa.question.Question method)

H

hamsa

module

hamsa.heuristics

module

hamsa.instance

module

hamsa.question

module

hamsa.survey

module

I

`IInstance` (class in hamsa.instance)
`Instance` (class in hamsa.instance)
`IQuestion` (class in hamsa.question)
`IQuestionType` (class in hamsa.question)
`ISurvey` (class in hamsa.survey)

M

module

hamsa

hamsa.heuristics

hamsa.instance

hamsa.question

hamsa.survey

O

`OPENED` (hamsa.question.QuestionType attribute)
`OpenEndedType` (class in hamsa.question)

P

`pre_process()`
(hamsa.question.ClosedEndedMultipleChoiceType method)
(hamsa.question.ConcreteQuestionsType method)
(hamsa.question.IQuestionType method)
(hamsa.survey.ISurvey method)
(hamsa.survey.Survey method)

Q

`Question` (class in hamsa.question)
`QuestionType` (class in hamsa.question)

R

`read_csv()` (in module hamsa)

S

`set_state()` (hamsa.question.IQuestion method)
(hamsa.question.Question method)
`Survey` (class in hamsa.survey)

T

`THRESHOLD_UNIQUE` (in module hamsa.heuristics)

U

`UNKNOWN` (hamsa.question.QuestionType attribute)

Python Module Index

h

[hamsa](#)

[hamsa.heuristics](#)

[hamsa.instance](#)

[hamsa.question](#)

[hamsa.survey](#)