StreamingCC

1.0.1

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Chapter 1

Hierarchical Index

1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

Chapter 2

Class Index

2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

Chapter 3

Class Documentation

3.1 CountMin< T > Class Template Reference

Process general type of data stream.

`#include <CountMin.hpp>`

Public Member Functions

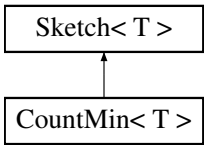
- CountMin (int _m, int _d=20)
- void processItem (const T &item, double weight=1)

  process a given (weighted) item
- double estTotWeight (const T &item)

3.1.1 Detailed Description

template<typename T>
class CountMin< T >

Process general type of data stream. Inheritance diagram for CountMin< T >:



3.1.2 Constructor & Destructor Documentation

3.1.2.1 template<typename T > CountMin< T >::CountMin (int _m, int _d = 20) [inline]

Parameters

↩ _↩ *m*	size of buffer
↩ _↩ *d*	number of buffers

3.1.3 Member Function Documentation

3.1.3.1 template<typename T > double CountMin< T >::estTotWeight (const T & *item*) [inline]

Returns

estimation of total weight of the given item

The documentation for this class was generated from the following file:

- include/CountMin.hpp

3.2 CountMin_basic Class Reference

CountMin_basic only process ItemType (aka int) stream, weight must be non-negative.

`#include <CountMin_basic.h>`

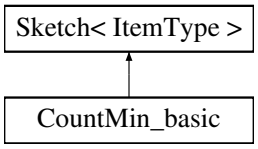
Public Member Functions

- CountMin_basic (int _m, int _d=20)
- void processItem (const ItemType &item, double weight=1)

  process a given (weighted) item
- double estTotWeight (const ItemType &item)

3.2.1 Detailed Description

CountMin_basic only process ItemType (aka int) stream, weight must be non-negative. Inheritance diagram for CountMin_basic:



3.2.2 Constructor & Destructor Documentation

3.2.2.1 CountMin_basic::CountMin_basic (int *_m,* int *_d* = 20)

Parameters

↩ _↩ *m*	size of buffer
↩ _↩ *d*	number of buffers

3.2.3 Member Function Documentation

3.2.3.1 double CountMin_basic::estTotWeight (const ItemType & *item*)

Returns

estimation of total weight of the given item

The documentation for this class was generated from the following files:

- include/CountMin_basic.h
- src/CountMin_basic.cpp

3.3 CountSketch< T > Class Template Reference

Process general type of data stream.

`#include <CountSketch.hpp>`

Public Member Functions

- CountSketch (int _m, int _d=20)
- void processItem (const T &item, double weight=1)

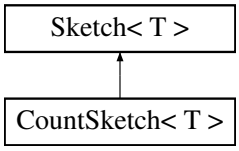
  process a given (weighted) item
- double estTotWeight (const T &item)

  give an estimation of total weight of the given item

3.3.1 Detailed Description

template<typename T>
class CountSketch< T >

Process general type of data stream. Inheritance diagram for CountSketch< T >:



3.3.2 Constructor & Destructor Documentation

3.3.2.1 template<typename T > CountSketch< T >::CountSketch (int *_m*, int *_d* = `20`) `[inline]`

Parameters

↩ _↩ *m*	size of buffer
↩ _↩ *d*	number of buffers

The documentation for this class was generated from the following file:

- include/CountSketch.hpp

3.4 CountSketch_basic Class Reference

CountSketch_basic only process ItemType (aka int) stream, weight can be negative.

`#include <CountSketch_basic.h>`

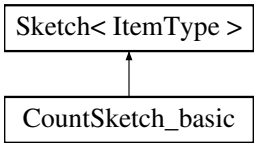
Public Member Functions

- CountSketch_basic (int _m, int _d=20)
- void processItem (const ItemType &item, double weight=1)

  process a given (weighted) item
- double estTotWeight (const ItemType &item)

3.4.1 Detailed Description

CountSketch_basic only process ItemType (aka int) stream, weight can be negative. Inheritance diagram for CountSketch_basic:



3.4.2 Constructor & Destructor Documentation

3.4.2.1 CountSketch_basic::CountSketch_basic (int *_m*, int *_d* = 20)

Parameters

↩ _↩ *m*	size of buffer
↩ _↩ *d*	number of buffers

3.4.3 Member Function Documentation

3.4.3.1 double CountSketch_basic::estTotWeight (const ItemType & *item*)

Returns

estimation of total weight of the given item

The documentation for this class was generated from the following files:

- include/CountSketch_basic.h
- src/CountSketch_basic.cpp

3.5 ReservoirSampling< T > Class Template Reference

Sampling over a data stream via Reservoir Sampling.

`#include <Sampling.hpp>`

Public Member Functions

- ReservoirSampling (int _nSamples, bool _withRpl=true)
- void processItem (const T &item, double weight=1.)

  process a given item
- std::vector< T > **getSamples** ()

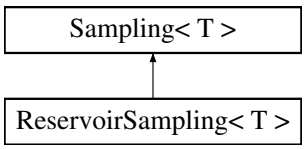
3.5.1 Detailed Description

template<typename T>
class ReservoirSampling< T >

Sampling over a data stream via Reservoir Sampling.

- For sampling with replacement, both weighted an unweighted data streams are supported.
- For sampling without replacement, currently only support unweighted data stream.

Inheritance diagram for ReservoirSampling< T >:



3.5.2 Constructor & Destructor Documentation

3.5.2.1 template<typename T > ReservoirSampling< T >::ReservoirSampling (int *_nSamples*, bool *_withRpl* = `true`) `[inline]`

Parameters

_nSamples	number of samples wanted
_withRpl	whether sampling with replacement

3.5.3 Member Function Documentation

3.5.3.1 template<typename T > void ReservoirSampling< T >::processItem (const T & *item*, double *weight* = `1.`) `[inline]`, `[virtual]`

process a given item

Note: for now `without_replacement` version can only handle unweighted data stream

Parameters

Parameters

weight	weight must be positive

Implements Sampling< T >.

The documentation for this class was generated from the following file:

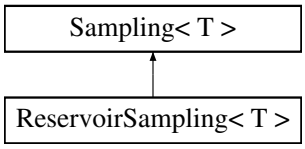
- include/Sampling.hpp

3.6 Sampling< T > Class Template Reference

Public Member Functions

- virtual void **processItem** (const T &item, double weight)=0
- virtual std::vector< T > **getSamples** ()=0

Inheritance diagram for Sampling< T >:



The documentation for this class was generated from the following file:

- include/Sampling.hpp

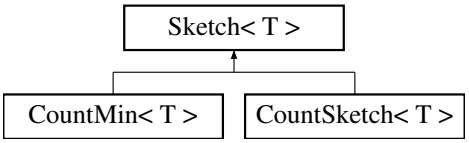
3.7 Sketch< T > Class Template Reference

Public Member Functions

- virtual void processItem (const T &item, double weight)=0

  process a given (possibly weighted) item

Inheritance diagram for Sketch< T >:



The documentation for this class was generated from the following file:

- include/Sketch.h

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