

---

# **apollon**

***Release 0.1.3***

**Michael Blaß**

**Jul 03, 2023**



# CONTENTS

<b>1</b>	<b>Contents</b>	<b>3</b>
1.1	Download . . . . .	3
1.2	Installation . . . . .	3
1.3	Framework . . . . .	4
1.4	apollon . . . . .	4



*apollon* is a feature extraction and modeling framework for music data analysis. It handles low-level audio feature extraction, their aggregation using Hidden Markov models, and comparison by means of the self-organizing map. See the [Framework](#) chapter for gentle introduction to the mentioned concepts.



## CONTENTS

### 1.1 Download

You can either download the source code from the [apollon GitHub repository](https://github.com/teagum/apollon) or clone it directly with

```
git clone https://github.com/teagum/apollon.git
```

### 1.2 Installation

apollon can be installed on GNU/Linux, macOS, and Windows. Installation process is similar on each of these platforms. Note, however, that apollon contains CPython extension modules, which have to be compiled locally for GNU/Linux and Windows users. If you work on those platforms, please make shure that there is a C compiler set up on your machine; otherwise the installation will fail. In the case of macOS, a precompiled wheel is provided for the latest version only.

#### 1.2.1 Install using pip

The Python packager manager can automatically download and install apollon from Pypi. Simply run the following command from your terminal:

```
python3 -m pip install apollon
```

#### 1.2.2 Install from source

You can also install and compile apollon directly from its sources in three steps:

- Download the apollon source code
- Open a terminal and navigate to the apollon root directory
- Install and compile with the following command

```
python3 -m pip install .
```

## 1.3 Framework

### 1.3.1 Audio Feature Extraction

Extract some of the most common low-level audio features.

### 1.3.2 Hidden Markov Model

Estimate Poisson-distributed Hidden Markov Models.

### 1.3.3 Self-Organizing Map

Train some Self-organizing maps.

## 1.4 apollon

### 1.4.1 apollon package

#### Subpackages

apollon.hmm package

#### Submodules

apollon.hmm.poisson module

apollon.hmm.utilities module

apollon.io package

#### Submodules

apollon.io.io module

apollon.io.json module

apollon.signal package

#### Submodules

apollon.signal.container module

apollon.signal.critical\_bands module



apollon.signal.features module

apollon.signal.filter module

apollon.signal.spectral module

apollon.signal.tools module

apollon.som package

Submodules

apollon.som.datasets module

apollon.som.defaults module

apollon.som.neighbors module

apollon.som.plot module

apollon.som.som module

apollon.som.topologies module

apollon.som.utilities module

Submodules

apollon.aplot module

apollon.audio module

apollon.container module

apollon.datasets module

apollon.fractal module

apollon.onsets module

apollon.segment module

apollon.tools module

apollon.types module

- genindex

- `modindex`