Vocal Maturity Coding (VMC) Installation Guide

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**VMC Installation Guide**

The VMC Application is a standalone Python application with an Amazon Web Services (AWS) backend. Once installed, it will require an internet connection to be able to download the utterance clips and send back the utterance coding choices of the app user. This document provides a walkthrough to install the application on any machine.

The VMC Application only requires Python and a set of libraries to be able to work. The following steps describe the process of installing all the requirements for Windows and Mac machines.

# VMC Installation Steps:

## Prerequisites

### Terminal Window

The instructions below show some command lines that you need to run from a terminal window. Here is how to start a terminal window on your machine:

* Mac:  
  Open the Terminal application (can usually be found in HD/Applications/Utilities/Terminal, or by searching for “Terminal” without the quotes).
* PC:  
  Type “**cmd**” without the quotes, in the “Search programs and files” text field. Once you see the “Command Prompt” app, choose “Run as administrator” option next to the app. If you do not see any options, right-click on the “Command Prompt,” and you will see them there.

### Xcode Installation (Mac Only)

Some Python libraries will need a compiler to be installed correctly. Hence, you need to install the Xcode on your machine. You can do that by going to the AppStore and searching for and installing the latest version of Xcode. Alternatively, you can run the following command from the Terminal:

$ xcode-select --install

## Installing Python

The first step is to install the desired version of Python, v3.7. Note that multiple Python versions can exist side-by-side, so if you have a different version of Python already installed, this installation will not affect it. (If you already have the required version, you may skip this step.) To install the desired version of Python, you should obtain it from the [Python download page](https://www.python.org/downloads/release/python-377/). Here are links for [Mac OS](https://www.python.org/ftp/python/3.7.7/python-3.7.7-macosx10.9.pkg) and [Windows](https://www.python.org/ftp/python/3.7.7/python-3.7.7-amd64.exe).

Notes (Windows Only):  
When following the installation wizard, you will need to choose the options to “install for all users” and to “Add Python to your PATH.” You also need to keep a note of the Python Installation location, which may be something like “C:\Program Files\Python\37\”. We will refer to this location as **(Python Path)**, and when seeing **(Python Path)** in the commands below, you must type the full path.

## VMC Folder on the Desktop

Right-click anywhere on your Desktop and create a new Folder called “VMC”. Then, place the files provided to you inside that folder. You should the following files:

cloud.config

requirements-PC.txt

requirements-Mac.txt

GetAppFromCloud.py

This folder is where we are going to install the VMC app.

## Python Virtual Environment Setup

To isolate the requirements for the VMC app from the main Python installation, we need to create a “custom location” that houses a Python executable, and all the necessary libraries in a folder other than the primary Python location. This technique allows for having any number of Python applications without worrying about requirement clashing. This custom location is referred to as a “Python Virtual Environment.” Please do the following to create a Virtual Environment in your VMC app folder, and then activate it so that we work entirely within that environment:

1. Open a Terminal window and navigate to the VMC app folder on the Desktop by typing:

* Mac:

$ cd ~/Desktop/VMC/

$ python3.7 -m venv PythonVirtualEnvironment

* PC:

$ cd %UserProfile%\Desktop\VMC

$ (Python Path)\python -m venv PythonVirtualEnvironment

1. Activate the virtual environment, in the same terminal window, by typing:

* Mac:

$ source PythonVirtualEnvironment/bin/activate

* PC:

$ PythonVirtualEnvironment\Scripts\activate

1. If you have successfully activated the virtual environment, your command prompt should now start with (PythonVirtualEnvironment). If not, then you have not yet activated the environment, and you may be working in an incorrect location.
2. Update the package manager in the environment.

* Mac & PC:

$ python -m pip install pip setuptools --upgrade

## Installing Python Libraries

Now that we have the virtual environment set and activated, we need to install the required libraries for the applications. These libraries are listed in the files “**requirements-PC.txt**” and “**requirements-Mac.txt**.” In the same window, with the environment activated, type the following line to install the necessary libraries:

* Mac:

$ python -m pip install -r requirements-Mac.txt

* PC:

$ python -m pip install -r requirements-PC.txt

## Downloading the Application

Your machine is now ready to download the application. In order to download the application, you will be using the access credentials provided to you by the application developer. Open the file “**cloud.config**” using any text editor, and add the information to the relevant lines without quotes. When done, the file should look like:

[AWS]

AccessKeyID = YOUR\_ACCESS\_KEY\_ID

SecretAccessKey = YOUR\_SECRET\_ACCESS\_KEY

Save the file and close the editor. In the terminal window, with the environment activated, type the following line to download the application:

* Mac & PC:

$ python GetAppFromCloud.py

If the application is downloaded successfully, you will see a folder called “Application” inside the “VMC” folder.

## Testing the Application

You are now ready to work with the application, so let’s go ahead and verify that. Close the terminal window you have been working with, and start a new one. Type the following to start the application:

* Mac:

$ cd ~/Desktop/VMC/

$ source PythonVirtualEnvironment/bin/activate

$ python Application/VmcLoader.pyc

* PC:

cd %UserProfile%\Desktop\VMC

PythonVirtualEnvironment\Scripts\activate  
python Application\VmcLoader.pyc

If the application starts, please login with your credentials, perform coding on one utterance, and then save it. You are now ready to work with the application. You may continue with the coding process, or you can close the application window.

## Testing the Cloud Update

Every time you start the application, it connects to the cloud to check for new versions. If a new version exists, it will download it and run it automatically. To verify that this process works as intended:

1. Open the file “**release.config**”, located inside the “Application” folder, using any text editor.
2. Modify the line containing the version number to become:

Version = 0.0.0

This would guarantee that a new update will be downloaded when starting the application. Save the file and close the editor.

1. Follow the instructions above to start the application. If successful, you should see a new folder called “Backup\_<Date\_and\_Time>” located alongside the folder “Application.” Moreover, if you open the file “**release.config**”, it will contain a new version number.

## Creating a Desktop Shortcut For the Application

Coming Soon …