# Install Instructions

**Backend**

The backend is implemented in Django, a high-level Python Web framework and deployed in Google Cloud Platform, using Google App Engine. PostgreSQL is used for databases, and it is also deployed in Google Cloud Platform.

**Run Backend Locally**

1. Make sure you install all the packages in requirement.txt.
2. If you are connected to the production database, then the Cloud SQL Proxy should be running in the local computer (cloud\_sql\_proxy-instances=cool-wharf-291516:us-central1:cornelius=tcp:3306)
3. Run python manage.py runserver

**Deploy Backend in Google App Engine**

Reference: https://cloud.google.com/python/django/appengine

1. Install Google Cloud SDK: To deploy the backend, Google Cloud SDK must be installed first. See instruction <https://cloud.google.com/sdk/docs/install> here. After installing Google Cloud SDK, you should be able to run gcloud in the command line.
2. Log in to Google Cloud : use gcloud auth application-default login
3. Deploy in Google App Engine
   1. If you do not modify the database schema (do not change the models.py), then you can deploy the app by running gcloud app deploy. You must be within the \app\_cornelius\backend directory of the app where the app.yaml file is located. Wait for the message that notifies you that the update has completed
   2. If you modify the database schema, you need to connect the Cloud SQL locally first in order to change:
      1. Install Cloud SQL Proxy: See instruction <https://cloud.google.com/sql/docs/mysql/sql-proxy>
      2. Start the Cloud SQL Proxy: Run cloud\_sql\_proxy-instances=cool-wharf-291516:us-central1:cornelius=tcp:3306
      3. Make change to database: Run python manage.py makemigrations and python manage.py migrate

**Database Credentials:**

In order to deploy the app, you need to configure the database connection in app\_cornelius\backend\cornelius\_site\settings.py, here are the credential for Cloud SQL instance cornelius and database cornelius\_db (<https://console.cloud.google.com/sql/instances/cornelius/users?project=cool-wharf-291516>)

**'HOST': '/cloudsql/cool-wharf-291516:us-central1:cornelius',**

**'USER': 'postgres',**

**'PASSWORD': 'cornelius1234',**

**'NAME': 'cornelius\_db',**

**Frontend**

**Run Frontend Locally**

1. Clone the repository from GitHub
2. Run **npm install** to install the necessary packages
3. Ensure that expo-cli is installed globally
   1. Otherwise, run **npm install --global expo-cli**
4. Run **npm start**
5. Scan the QR code on your phone or open the simulator from the browser pop-up
   1. To run the app on your phone, check that Expo Client is installed from the app store before scanning the QR code
   2. To run the app on a computer simulator, ensure that a simulator is installed on your machine

We used node package manager (npm) in order to keep track of the packages and libraries used in our project. In order to add a new dependency or package to the application, a developer would need to run “npm install <package name> --save” and it will be added to the package.json file and incorporated into the app. Refer to the Technical Documentation to learn more about why React Native and Expo were chosen for this application.

**Deploy the Frontend with Expo**

Requirements: [Git](https://git-scm.com/), [Node.js LTS release](https://nodejs.org/en/), [Watchman](https://facebook.github.io/watchman/docs/install#buildinstall), [Expo CLI](https://docs.expo.io/workflow/expo-cli/) (macOS users)

Helpful references:

* Expo CLI Documentation:<https://docs.expo.io/workflow/expo-cli/>
* Publishing:<https://docs.expo.io/workflow/publishing/>

Within the \app\_cornelius\frontend directory:

1. Run npm install to install all frontend dependencies from the project.
2. Running app on device
   1. Publishing project to Expo
      1. Run expo publish to deploy the app to be available at a persistent URL.
      2. Create or enter user account information that you want to be associated with this project.
      3. Access the application via the Expo app by logging in using account information from Step 2.2.2. or through the link generated in Step 2.2.1. (ex:<https://exp.host/@ccheever/an-example>).

# 

# Open Source Libraries

* + - list all open source tools or libraries your project uses, their versions, and links to their associated licenses -  
      Note, if this is included in a standard file as part of your project's build process (like pom.xml or package.json), that can just be noted in the doc folder.

Open source tools for Google Speech transcription functionalities:

* Transcribe Function: <https://github.com/googleapis/python-speech/blob/master/samples/snippets/transcribe_async.py>
* License: <https://github.com/googleapis/python-speech/blob/master/LICENSE>
* Frontend Set Up for transcription & Recording: <https://github.com/PhilippSh/expo-stt-app>
* Upload Function: <https://cloud.google.com/storage/docs/uploading-objects#storage-upload-object-code-sample>
* Tutorials: <https://cloud.google.com/speech-to-text/docs/tutorials>

The backend packages are listed in **/app\_cornelius/backend/requirement.txt**

The frontend dependencies are listed in **/app\_cornelius/frontend/package.json**

At the time this is being written those packages are:

* "@react-native-community/masked-view": "0.1.10",
* "@react-native-picker/picker": "^1.9.2",
* "@react-navigation/bottom-tabs": "^5.9.1",
* "@react-navigation/native": "^5.7.3",
* "@react-navigation/stack": "^5.9.0",
* "axios": "^0.20.0",
* "enzyme": "^3.11.0",
* "expo": "~38.0.8",
* "expo-av": "^8.6.0",
* "expo-file-system": "^9.2.0",
* "expo-font": "~8.2.1",
* "expo-permissions": "^9.3.0",
* "expo-status-bar": "^1.0.2",
* "native-base": "^2.13.14",
* "react": "~16.11.0",
* "react-dom": "~16.11.0",
* "react-native": "https://github.com/expo/react-native/archive/sdk-38.0.2.tar.gz",
* "react-native-elements": "^2.3.2",
* "react-native-form-validator": "^0.3.5",
* "react-native-gesture-handler": "~1.6.0",
* "react-native-input-validator": "^1.0.10",
* "react-native-normalize": "^1.0.1",
* "react-native-reanimated": "~1.9.0",
* "react-native-safe-area-context": "~3.0.7",
* "react-native-screens": "~2.9.0",
* "react-native-web": "~0.11.7",
* "react-navigation": "^4.4.2",
* "react-redux": "^7.2.2",
* "redux": "^4.0.5"

# Guide for Data Changes

* + - data changes, address ways to update or change key non-programming components of the app, such as database information, data files, resource links, phone numbers, server addresses, etc.

**Database:**

* To manage database, go to Django Admin Page <https://cool-wharf-291516.ue.r.appspot.com/admin> and log in with superuser account

**Username: cornelius\_admin**

**Password: cornelius1234**

* To change database instance, follow Step 3.b under Deploy Backend in Google App Engine section
* To connect to a different database, modify the app\_cornelius\backend\cornelius\_site\settings.py file