Sample 1

# Biology sample

This is the sample to be used for testing purposes against the Custom Speech Service at <https://cris.ai> The biology sample is a great example of how powerful a custom language model can be for your application.

# Data

The sample consist of approximately 150 statements about organisms that lived primarily in Triassic and Jurassic period. The names are in scientific form which rarely appear in everyday language. The facts are described in the ‘*Language Data.txt’* file.

In addition, the sample contains approximately 50 audio utterances (50 .wav files) which can be used to test the above model using the offline testing feature during deployment. There is a *transcriptions.tsv* file associated with those audio files that captures the transcriptions of each one of them. If you open the file you will see that it contains key value pairs where the name of the file is the key and the transcription the actual value. You can .zip those audio files and import them along with the associated transcription file using the ‘Import Acoustic Data’ menu option.

# Modelling

You can use the ‘*Language Data.txt’* file to create a language model on Custom Speech Service and deploy it along with an acoustic baseline model of the two available. Simply upload the file using the ‘Import Language Data’ and create a new Language model via the ‘Create Language Model’ menu option.

Once you have created a language model you can deploy it via the ‘Deployments’ menu option.

During deployment of your custom model you can tick the ‘Offline Test’ option. Point to the acoustic data you uploaded in the previous step. The model deployment process will start and once deployed the audio utterances will be tested against the newly deployed endpoint. The audio utterances will be send for transcription and the results will be displayed.

# Results

As part of the results page you will see a set of numbers along with a list of transcriptions (as many as the audio files you uploaded). Read the transcriptions to get a feel of the quality of the results. The numbers serve as a comparison between the baseline model and the custom model that you created. They demonstrate transcription accuracy both from the baseline and the custom model. Remember that the *transcriptions.tsv* contains the correct transcriptions of all the audio files, so internally our system compares those against both the baseline and the custom models. The improvement over baseline for this sample is typically around 70% and the overall accuracy of the custom is close to 90%. Needless to say that with a richer language model accuracy can potentially go up.