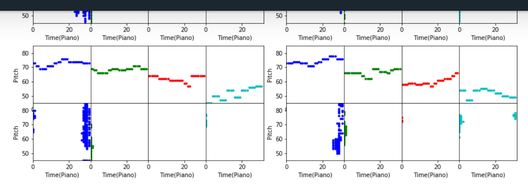


Example Piano Roll at Iteration 0

25. In the first cell, enter `500` as the iteration number:

```
iteration = 500
```

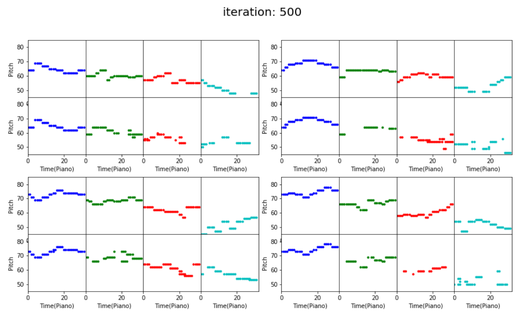
run the cell and play the music snippet.
Or listen to the example snippet at iteration 500.

0:00 / 0:16

26. In the second cell, enter `500` as the iteration number:

```
iteration = 500
```

run the cell and display the piano roll.



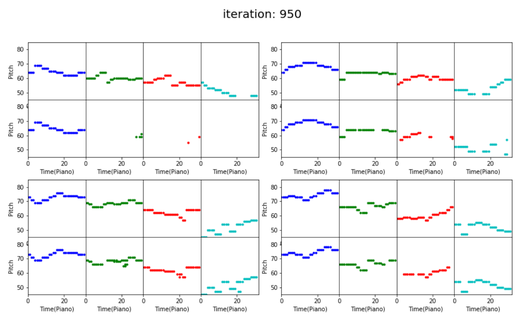
Example Piano Roll at Iteration 500

Play around with the iteration number and see how the output changes over time!

Here is an example snippet at iteration 950

0:01 / 0:17

And here is the piano roll:



Example Piano Roll at Iteration 950

Do you see or hear a quality difference between iteration 500 and iteration 950?

Watch the Evolution of the Model!

27. Run the next cell to create a video to see how the generated piano rolls change over time.
    Or watch the example video here:

Inference

Now that the GAN has been trained we can run it on a custom input to generate music.

28. Run the cell to generate a new song based on "Twinkle Twinkle Little Star".
    Or listen to the example of the generated music here:

0:01 / 0:09

29. Run the next cell and play the generated music.
    Or listen to the example of the generated music here:

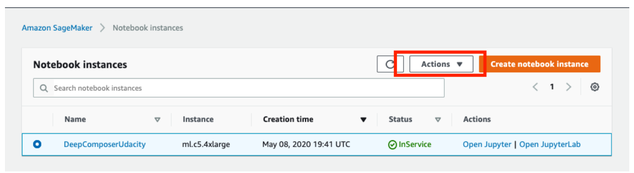
0:02 / 0:06

Stop and Delete the Jupyter Notebook When You Are Finished!

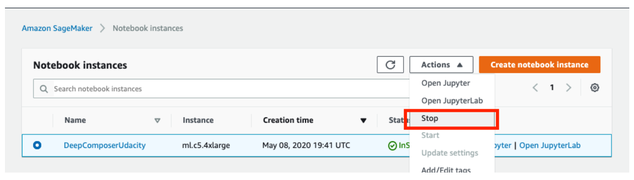
This project is not covered by the AWS Free Tier so ***your project will continue to accrue costs as long as it is running.***

Follow these steps to stop and delete the notebook.

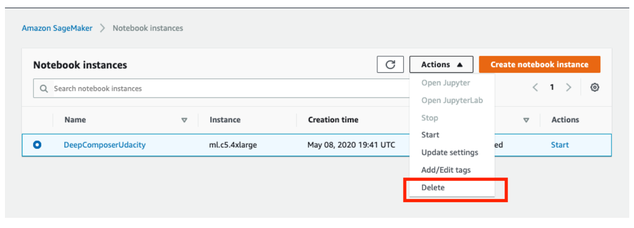
1. Go back to the Amazon SageMaker console.
2. Select the notebook and click **Actions**.



3. Select **Stop** and wait for the instance to stop.



4. Select **Delete**



Recap

In this demo we learned how to setup a Jupyter notebook in Amazon SageMaker, about machine learning code in the real world, and what data preparation, model training, and model evaluation can look in a notebook instance. While this was a fun use case for us to explore, the concepts and techniques can be applied to other machine learning projects like an object detector or a sentiment analysis on text.

NEXT