CH6. The universal workflow of machine learning

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The universal workflow of machine learning

Define the task

Develop a model

Deploy the model

Define the task

1. Frame the problem:

   - What will the input data? What we want to predict?
   - What type of machine learning task are you facing?
   - What do existing solutions look like?
   - Are there particular constraints you will need to deal with?

Why Voice Liveness Detection?

HOME > ADVERTISING

Burger King's Google Home Whopper stunt just won a big advertising award

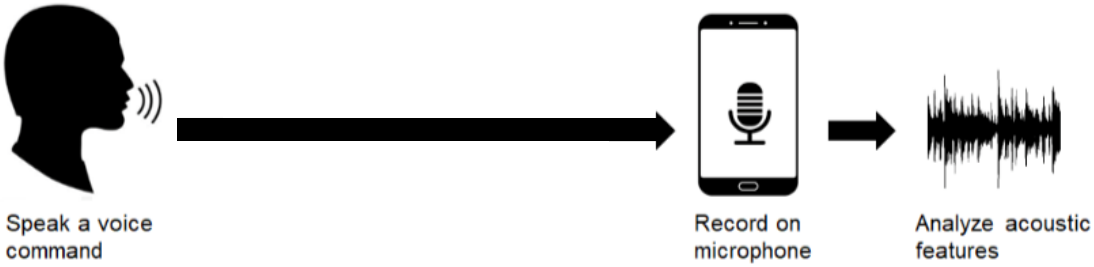
Tanya Dua Jun 21, 2017, 6:11 AM

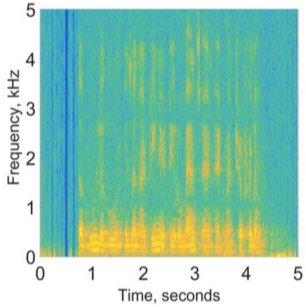
After sneaking into people's homes, Burger King has managed to sneak out with an award at the Cannes Lions, advertising's biggest annual gathering.

Back in April, the fast food

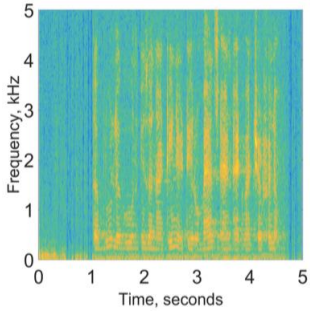
Voice Liveness Detection

Genuine





Replayed



2. Collect a dataset:

Inputs and targets are decided, Time for data collection—the most arduous, time-consuming part of most machine learning projects.

Beaware of non-representative data

it’s critical that the data used for training should be representative of the production data

3. Understand your data

   Before you start training models, you should explore and visualize your data to gain insights about what makes it predictive

4. Choose a measure of success

   Define what you mean by success. Define the evaluation metric and business requirement for the solution

Develop a model

Prepare the data

Choose an evaluation protocol

Beat a baseline

Scale up: Develop a model that overfits

Regularize and tune your model

Deploy the model

Explain your work to stakeholders and set expectations

Ship an inference model

Monitor your model in the wild

Maintain your model

Thank you!