



2017 MIDC
小米 IoT 开发者大会 | 小米生态云技术论坛

小米 AI 服务平台

Cloud-ML





Agenda

Cloud Machine Learning平台

Cloud-ml服务介绍(PaaS)

Cloud-ai服务介绍(SaaS)

Cloud Machine Learning 平台

The Business

App1

App2

App3

App4

App5

.....

Cloud Machine Learning Platform

Compute Resource

GPU Server

CPU Server

VMs

AWS

Cloud Machine Learning 平台

Cloud Machine Learning 平台已于5月上线

提交任务数最高150/日，平均50/日

目前已经有以下业务在使用

- 小米：小米金融 / Mi TV / 搜索推荐 / 语音 / 聊天机器人 / 米家有品 / 拍照
- 生态链：秒秒测 / 骑记 / 小蚁 / 智米

Cloud-ML 已经支持以下框架

- Tensorflow / PyTorch / Caffe / Caffe2 / Mxnet / Theano / Keras / Torch / Kaldi / Xgboost

Cloud-AI 已经支持以下功能

- 视觉：人脸识别，人脸对比，物体识别
- NLP：翻译



Cloud-ML

让算法工程师更高效的训练模型

ML Dev Env

Process Pipeline

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ML Dev Env

ssh env

```
1. IPython: /root (ssh)
Last login: Fri Nov 24 00:33:14 on ttys001
xies-MBP:~ xiezhi$ ssh -p 41397 root@10.38.11.209
root@10.38.11.209's password:
Last login: Thu Nov 23 18:13:59 2017 from 172.17.11.0
root@de-4380-ezhi-035325-2056038464-p74dc:~# ipython
Python 2.7.12 (default, Nov 19 2016, 06:48:10)
Type "copyright", "credits" or "license" for more information.

IPython 5.0.0 -- An enhanced Interactive Python.
?                -> Introduction and overview of IPython's features.
%quickref        -> Quick reference.
help             -> Python's own help system.
object?         -> Details about 'object', use 'object??' for extra details.

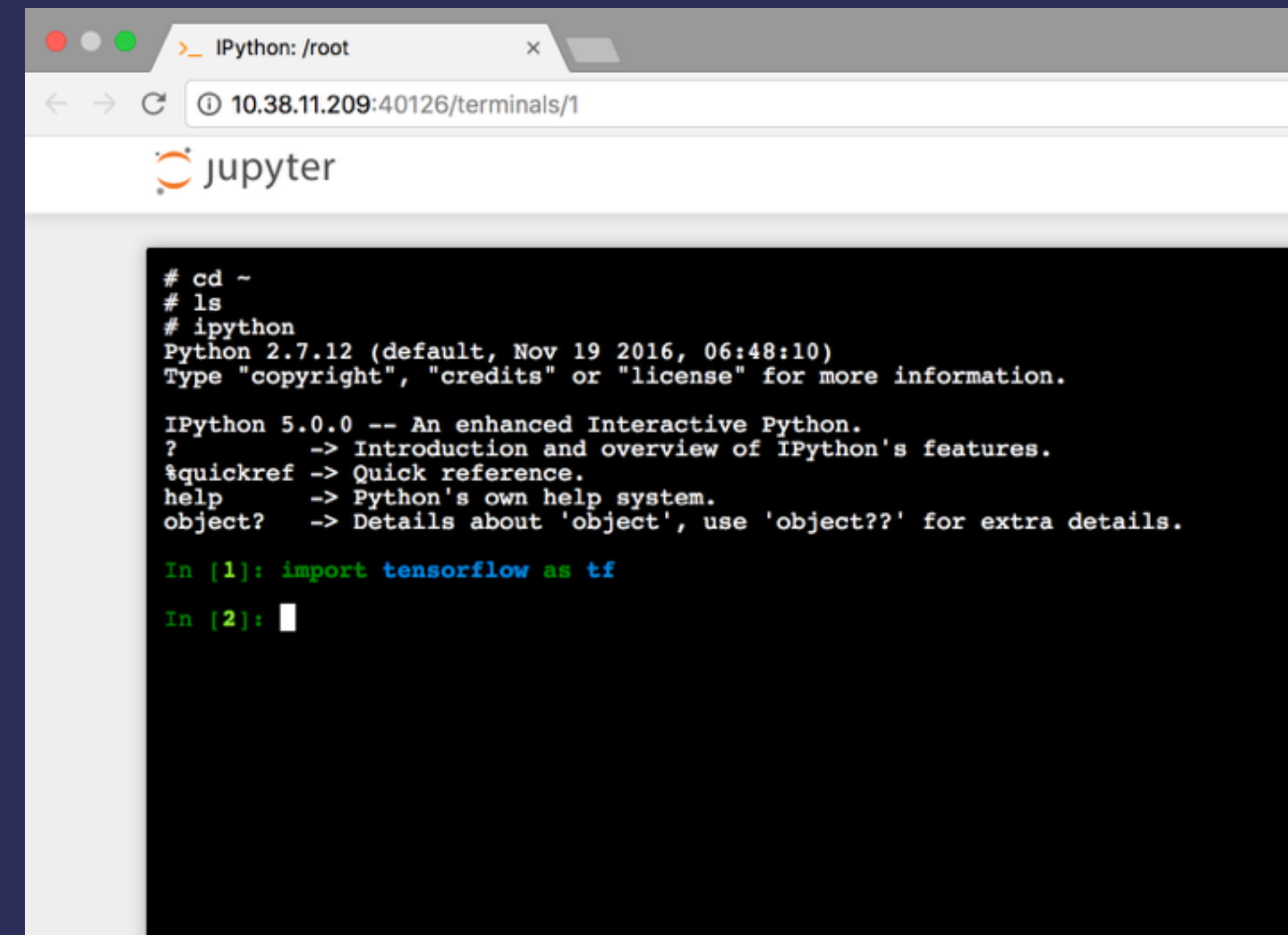
In [1]: import tensorflow as tf

In [2]:
```

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ML Dev Env

web env



```
# cd ~
# ls
# ipython
Python 2.7.12 (default, Nov 19 2016, 06:48:10)
Type "copyright", "credits" or "license" for more information.

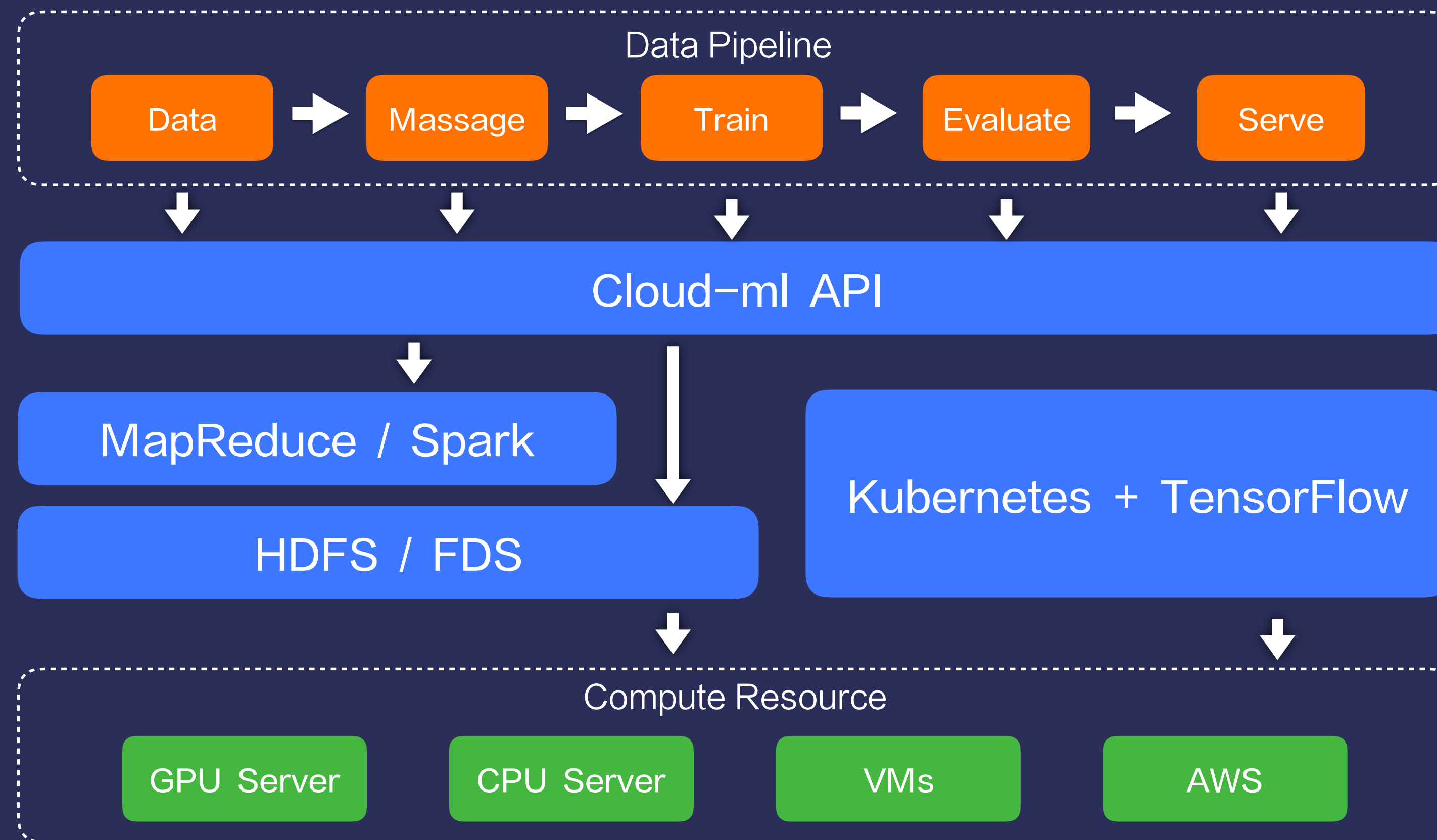
IPython 5.0.0 -- An enhanced Interactive Python.
?                -> Introduction and overview of IPython's features.
%quickref        -> Quick reference.
help             -> Python's own help system.
object?         -> Details about 'object', use 'object??' for extra details.

In [1]: import tensorflow as tf

In [2]:
```

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Pipeline Processing



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Pipeline Processing

- HDFS Fuse / FDS Fuse
- Data Process
- Auto Evaluating

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输出高性能，高质量的AI服务

背靠多家AI服务供应商

- XiaoMi / Microsoft / Tencent / Baidu
- 指定供应商 / 自动选择



Cloud-AI

视觉服务



FaceInfo:
topX: 208
topY: 73
width: 403
height: 403
child
female
age: 5.6



TagInfo:
Living room: 0.52
Dining room: 0.14
Hall: 0.08
Waiting room: 0.06



Match Score: 0.82

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翻译服务

文本翻译 / 图片翻译 / 语音翻译

支持8国语言互译

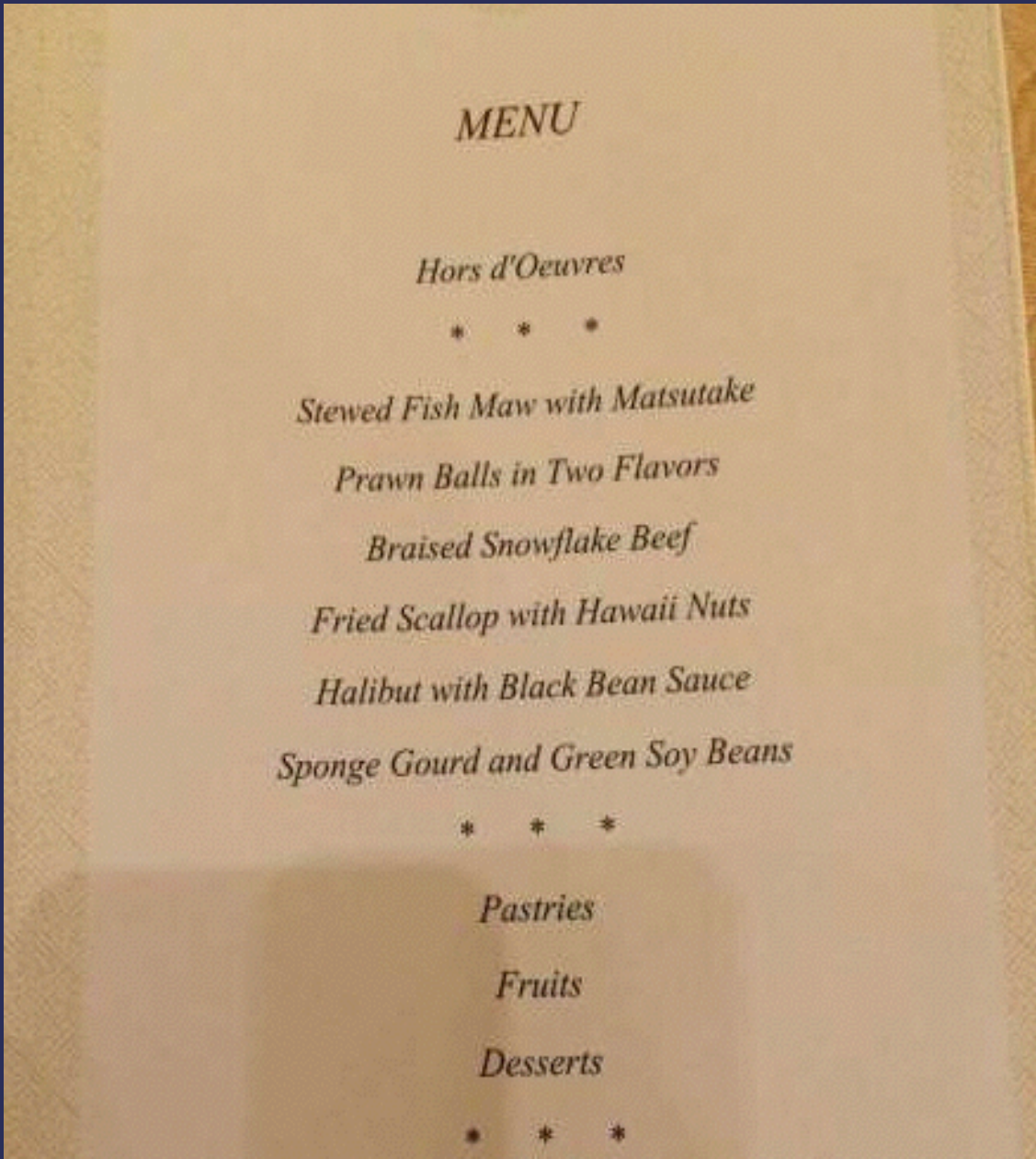
- 中、英、日、韩、法、德、西、印地语

支持自动检测语言



Cloud-AI

图片翻译



```
{  
  "textAngle": "-2.2",  
  "orientation": "UP",  
  "regions": [  
    {  
      "boundingBox":  
        "114,45,219,380",  
      "lines": [  
        {  
          "toText": "菜单",  
          "text": "MENU",  
          "boundingBox": [.....]  
        }  
      ]  
    }  
  ]  
}
```

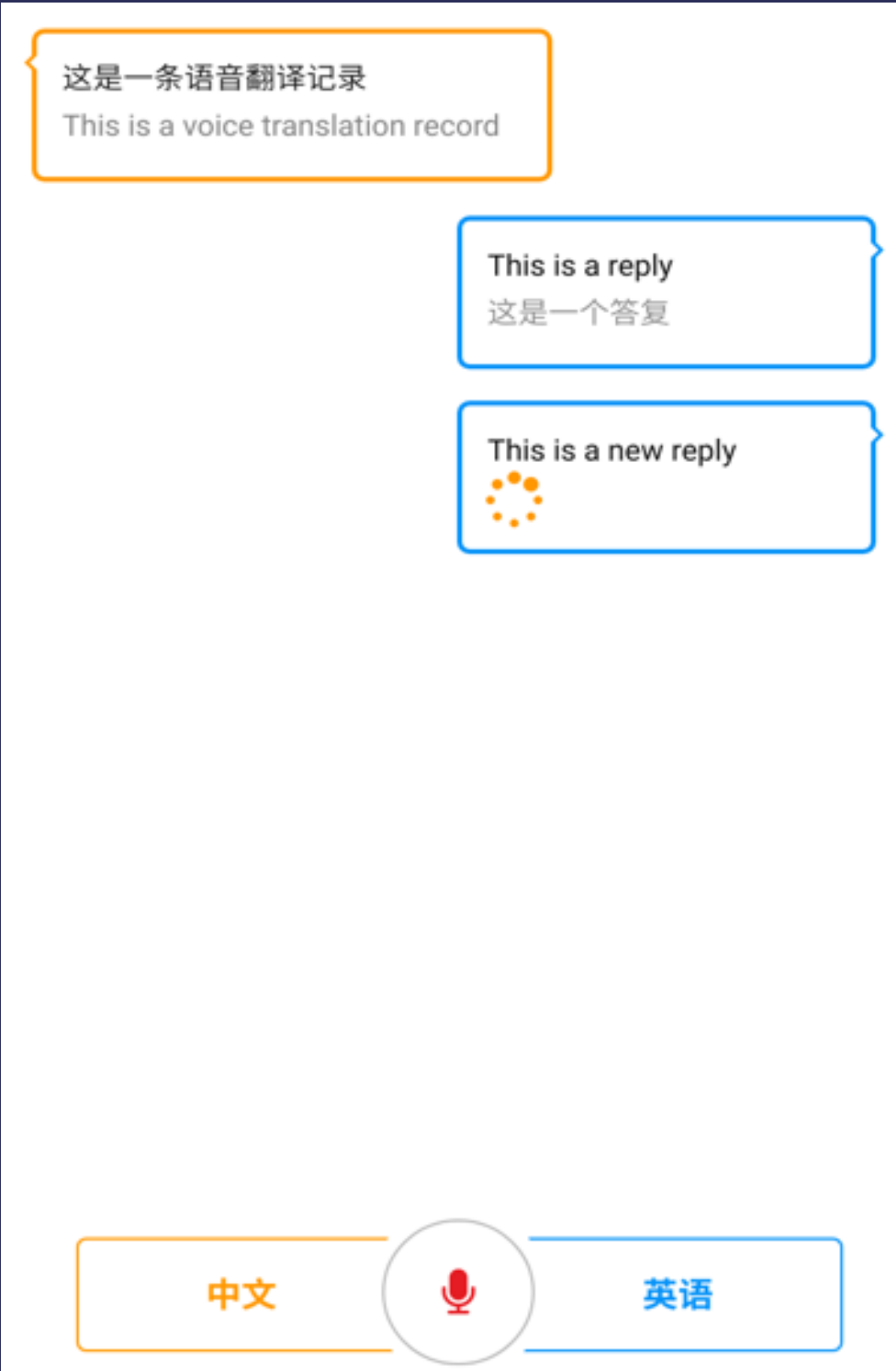
两种口味的
Prawn球





Cloud-ML

语音翻译



```
{  
  "type": "final",  
  "recognition": "世界你好",  
  "translation": "Hello World",  
  "tts_binary": [.....]  
}
```



谢谢！

