Add Language Intelligence to Your Apps with LUIS

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Agenda

- NLP basics
- What is LUIS?
- LUIS components
  - Intent
  - Utterance
  - Entity
- Creating a LUIS app demo
- Publishing your LUIS model
- Consuming a LUIS app
  - Demo

NLP Basics

Text takes a lot of work for understanding

- Tokenization
- Stop words
- Lemmentizing
- Part of Speech Tagging
- Named Entity Recognition

The Natural Language Tool Kit (NLTK) and SpaCy Python packages can help with understanding text.

Load Text Data

```
import spacy

text = "Hi, I'd like a flight to RDU next week for around $200."

nlp = spacy.load(“en”)

doc = nlp(text)
```

Tokenzation

```
for d in doc:
    print(d.text, end="|")
```

```
Hi|,|I|'d|like|a|flight|to|RDU|next|week|for|around|$|200|.|
```

Removing Stop Words

```
for d in doc:
    print(d, "-", d.is_stop)
```

```
Hi - False
, - False
I - False
'd - False
like - False
a - True
flight - False
to - True
RDU - False
next - True
week - False
for - True
around - True
$ - False
200 - False
. - False
```

Lemmatizing

```
for d in doc:
    print(d, "-", d.lemma_)
```

```
Hi - hi
, - ,
I - -PRON-
'd - would
like - like
a - a
flight - flight
to - to
RDU - rdu
next - next
week - week
for - for
around - around
$ - $
200 - 200
. - .
```

Part of Speech Tagging

```
for d in doc:
    print(d, "-", d.pos_)
```

```
Hi - INTJ
, - PUNCT
I - PRON
'd - VERB
like - VERB
a - DET
flight - NOUN
to - ADP
RDU - VERB
next - ADJ
week - NOUN
for - ADP
around - ADV
$ - SYM
200 - NUM
. - PUNCT
```

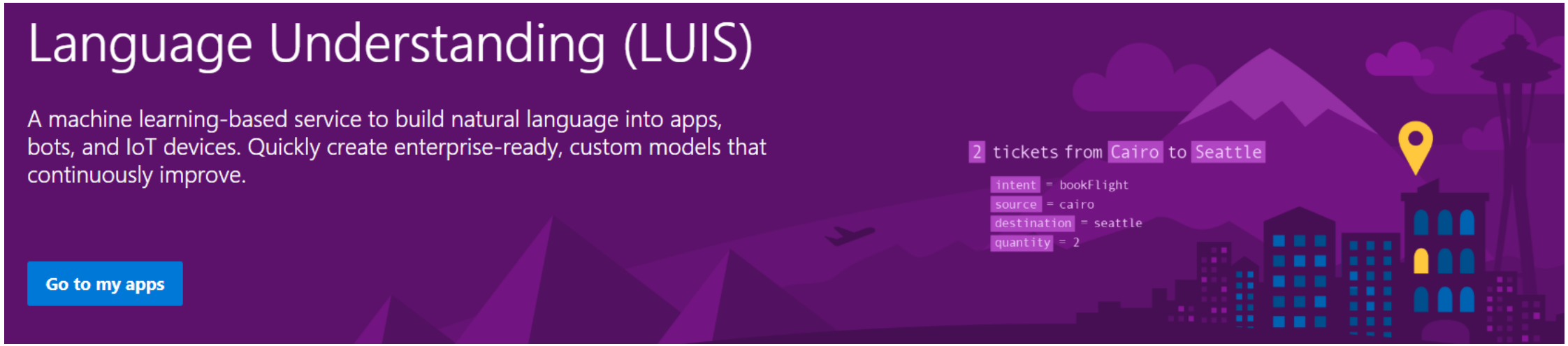
Named Entity Recognition

```
for ent in doc.ents:
    print(ent.text, "-", ent.label_)
```

```
RDU - ORG
next week - DATE
around $200 - MONEY
```

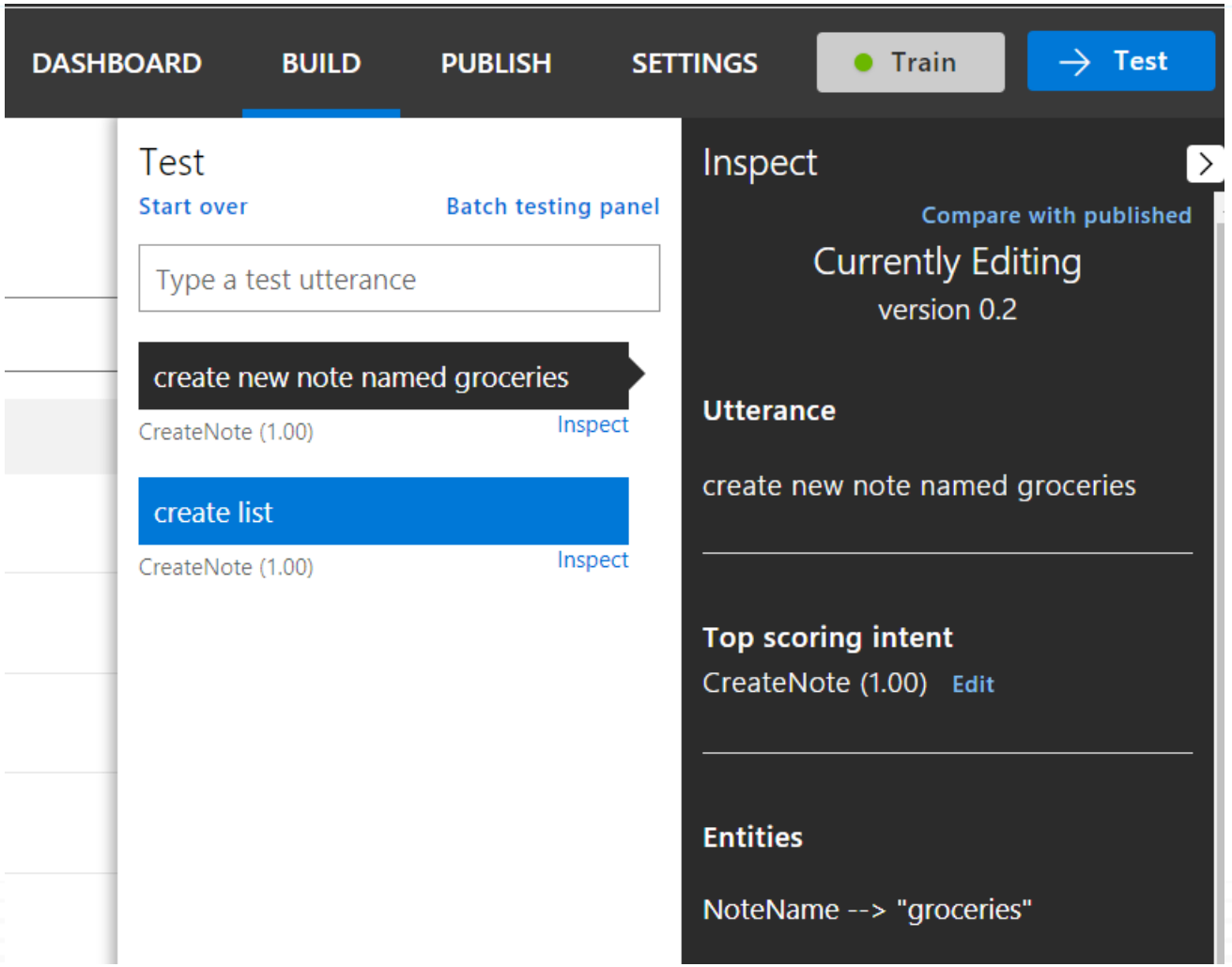
What is LUIS?

Build natural language understanding into applications.



What is LUIS?

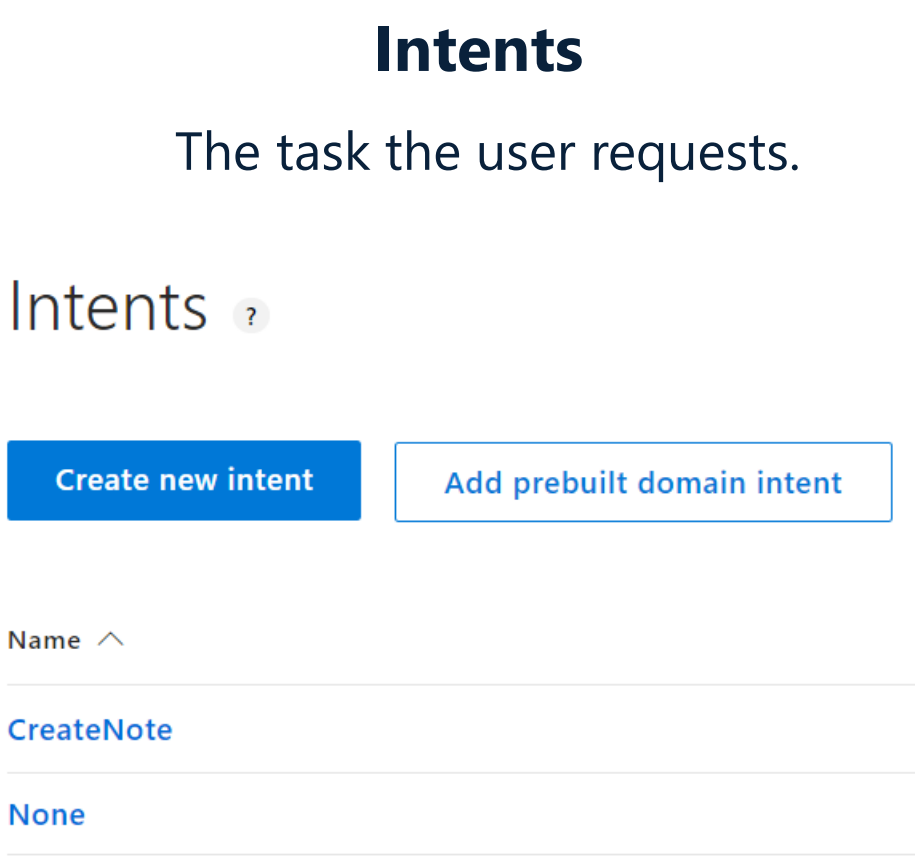
Easily train, test, and publish models

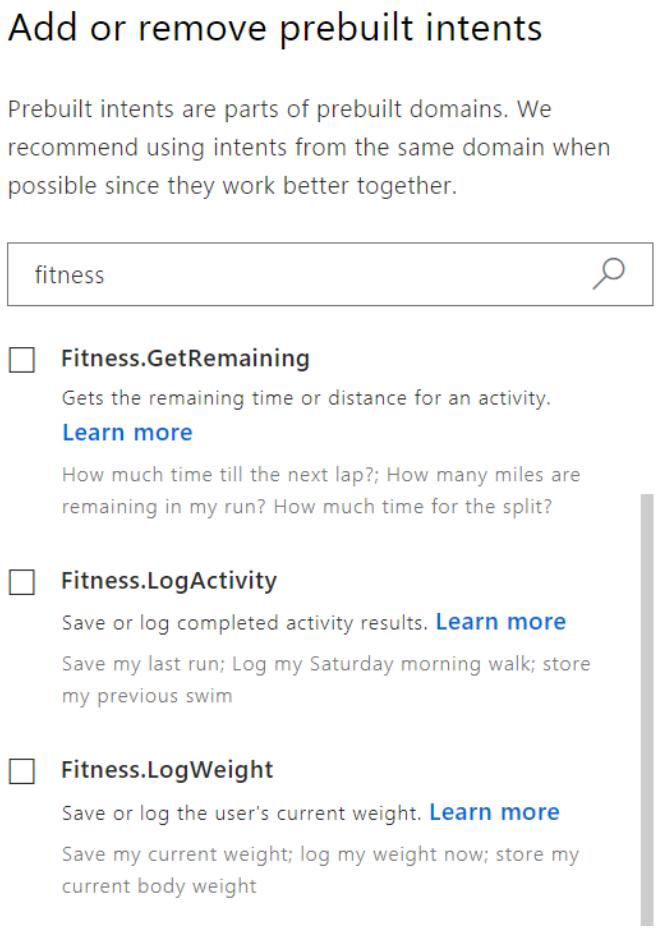


LUIS Components

Intents

The task the user requests.

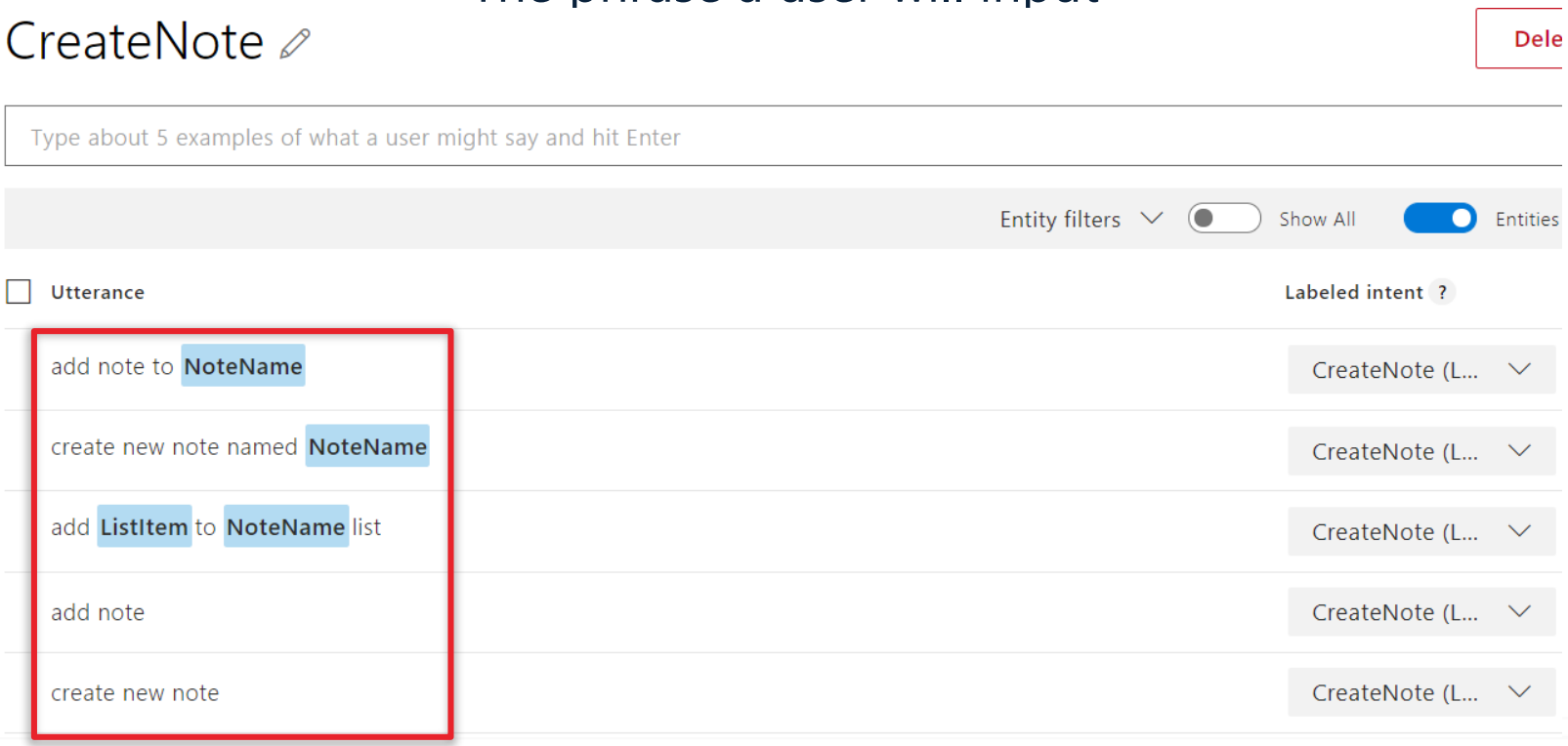




LUIS Components

Utterance

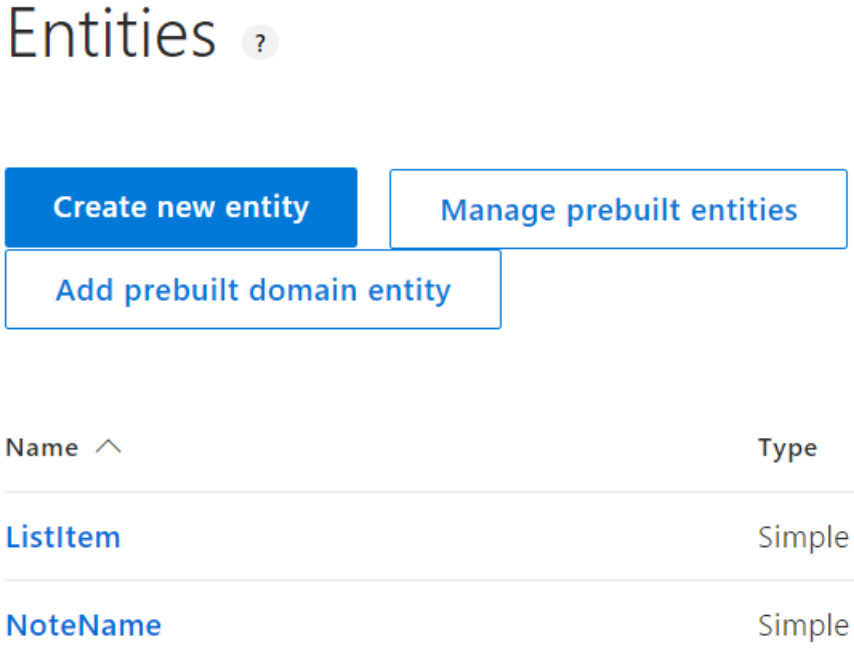
The phrase a user will input

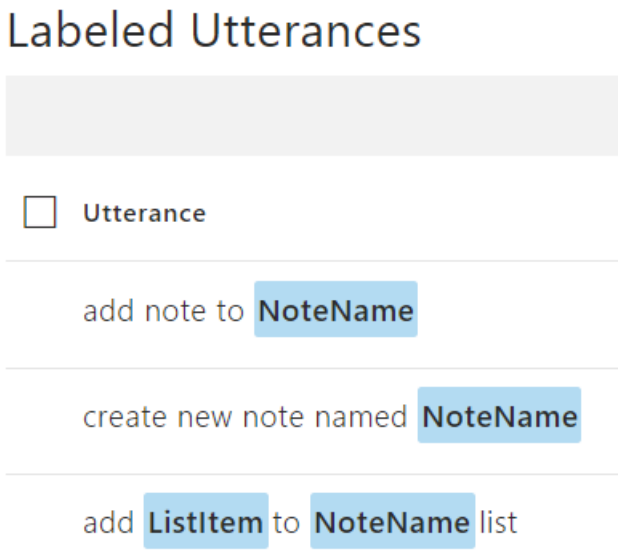


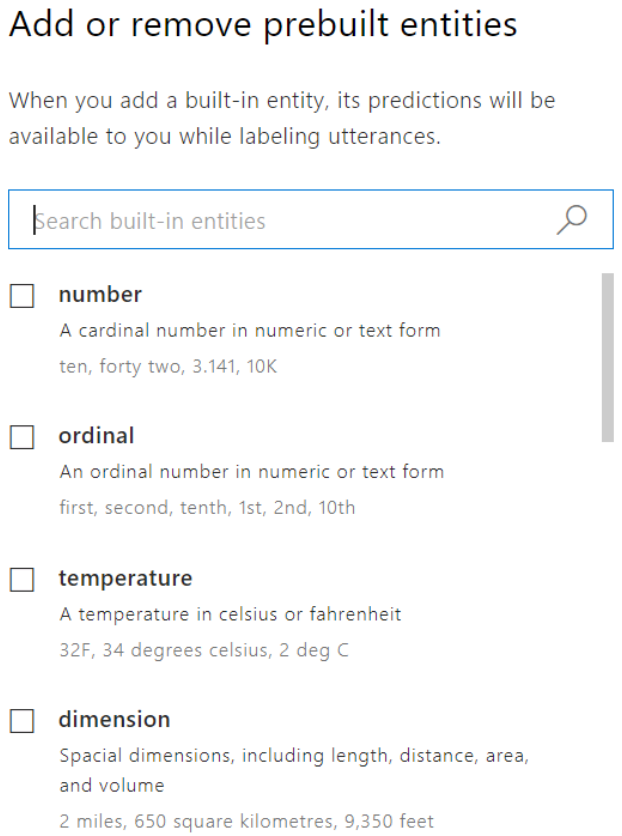
LUIS Components

Entity

Words in an utterance that describes an intent.





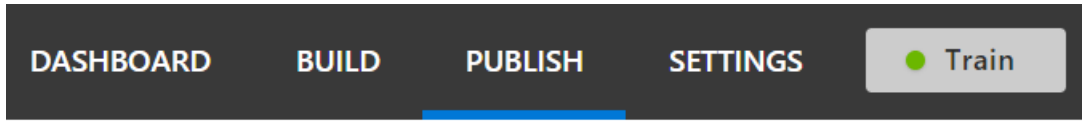


Demo

Create a LUIS app

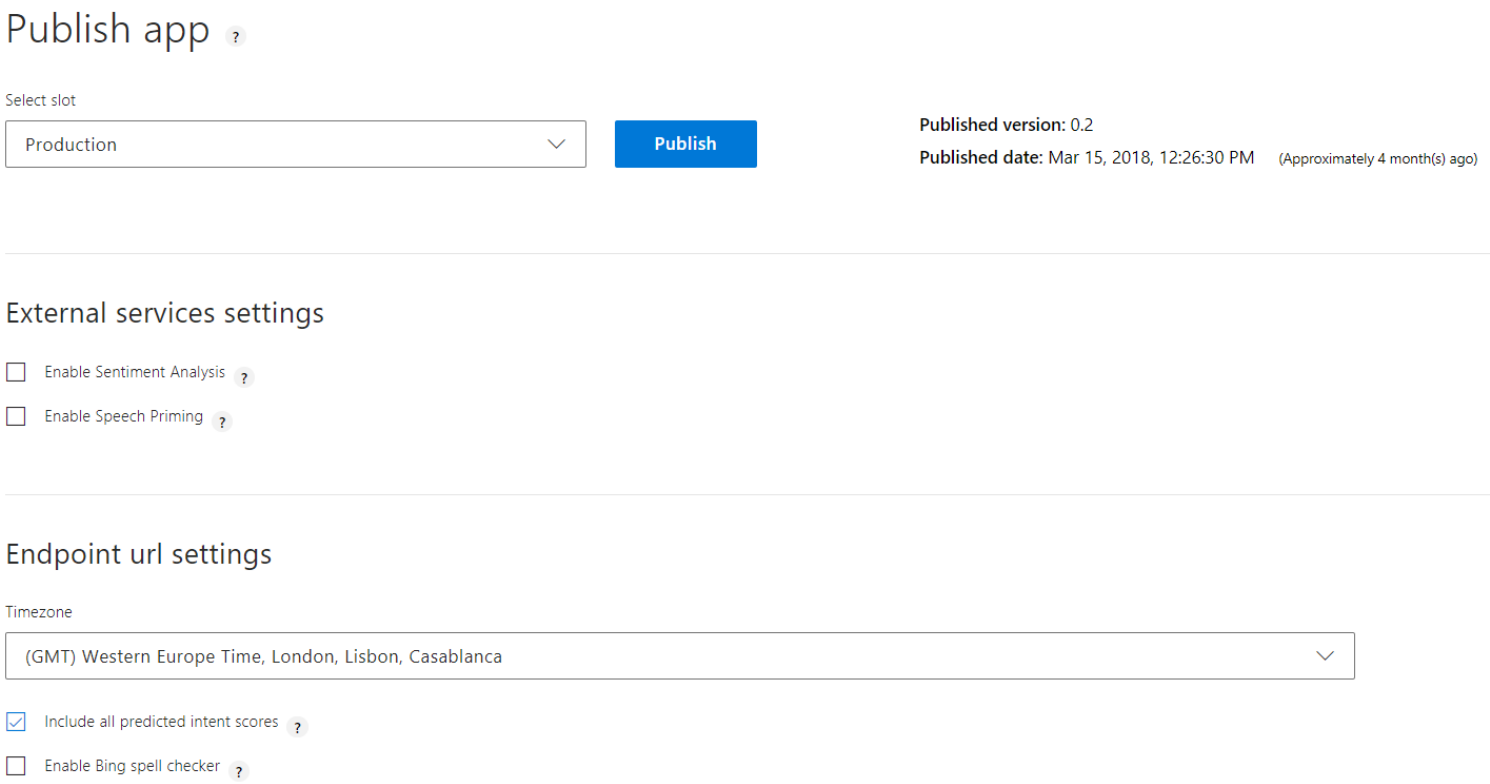
Publishing

Train Model



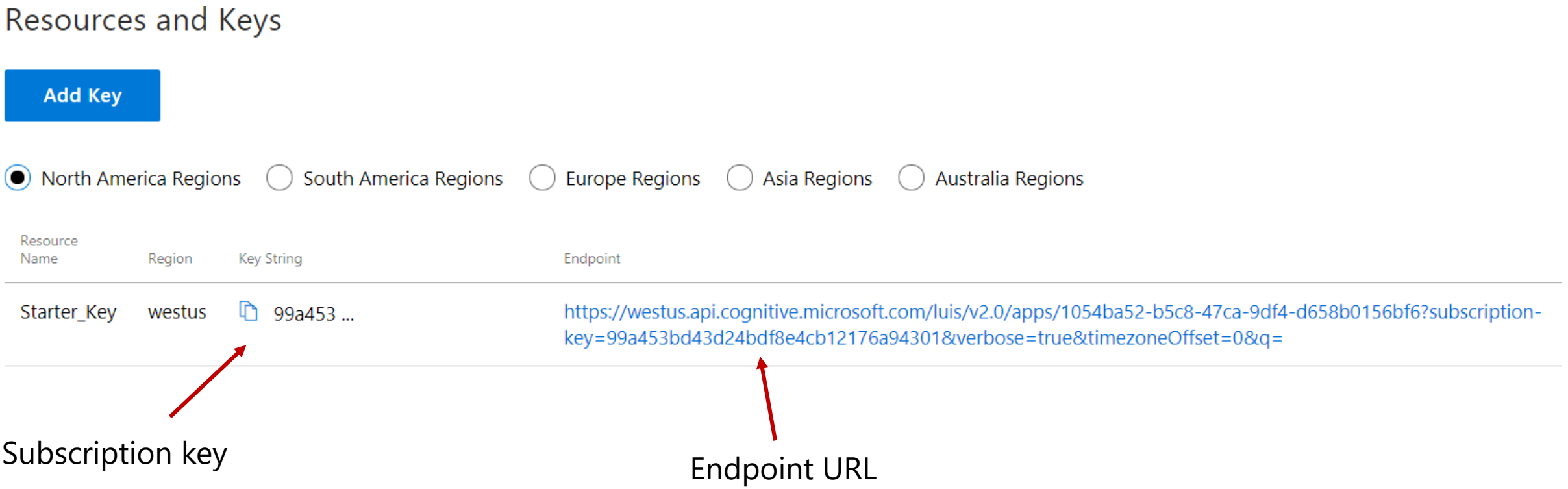
Publishing

Publish Model



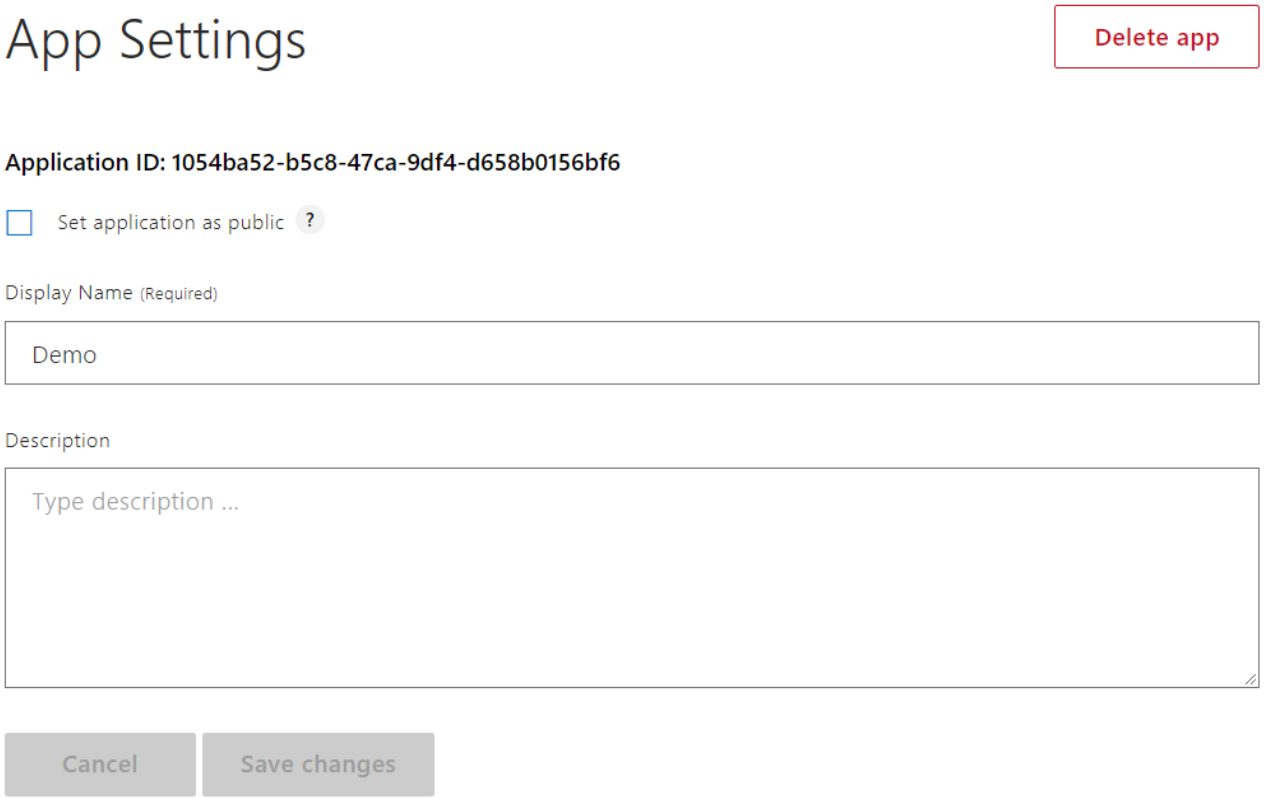
Consuming Model

Subscription Key



Consuming Model

LUIS App ID



Demo

Integrate a LUIS app

Questions?

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