# Markov Text Generation

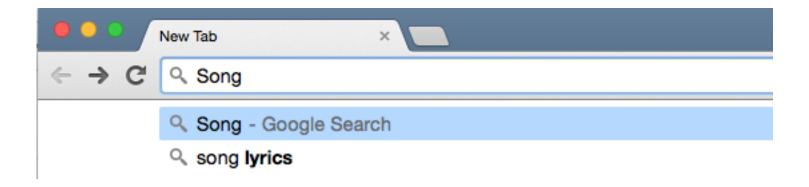
Background



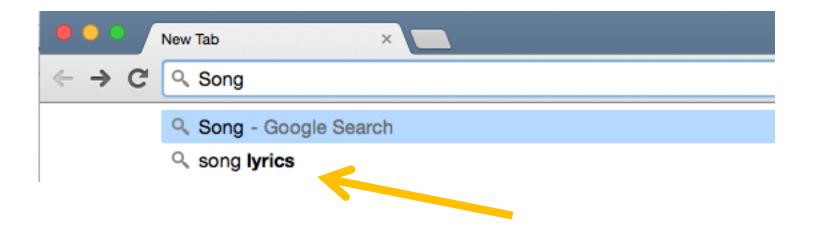
### By the end of this video you will be able to...

- Explain how Markov processes can be used to generate text
- Distinguish between training on text and generating text

# Predicting the future



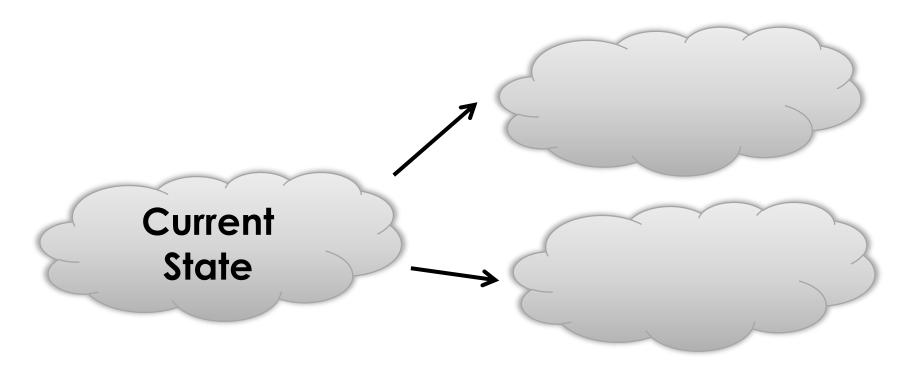
## Predicting the future



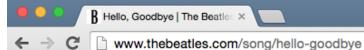
### Predicting the future: Markov processes



## Predicting the future: Markov processes



## State?



**BEATLES** 

**EXPLORE** 

**ALBUMS** 

SONGS

STORE

**NEWS** 

LOGIN/

### Hello, Goodbye

#### SONG

You say yes, I say no,

You say stop, and I say go, go, go,

Oh no.

You say goodbye and I say hello, hello, hello, I don't know why you say goodbye, I say hello, hello,

I don't know why you say goodbye, I say hello.

I say high, you say low,

You say why, and I say I don't know.

Oh no.

You say goodbye and I say hello, hello, hello. I don't know why you say goodbye, I say hello, hello, hello,

I don't know why you say goodbye, I say hello.

Why, why, why, why, why,

Do you say goodbye.

Oh no.

You say goodbye and I say hello, hello, hello.

I don't know why you say goodbye, I say hello,

hello, hello,

I don't know why you say goodbye, I say hello.

You say yes, I say no,

You say stop and I say go, go, go.

#### WikipediA

The Free Encyclopedia
"Hello, Goodbye"



#### Cover artwork for the single, as used in the US

#### Single by The Beatles

B-side "I Am the Walrus" Released November 24, 1967

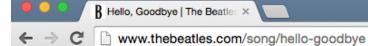
Format 7"

Recorded 2 October - 2 November 1967

EMI Studios, London

Genre Pop rock
Length 3:27
Label Parlophone
Writer(s) Lennon-McCartney
Producer George Martin
Certification Gold (RIAA)

You say hello. I don't know why you say hello, hello. I say goodbye. Oh no. You say no, You



BEATLES

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**ALBUMS** 

SONGS

**NEWS** 

STORE

LOGIN/

### Hello, Goodbye

#### SONG

You say yes, I say no,

You say stop, and I say go, go, go,

Ohno

You say coodbye and I say hello, hello, hello, I don't know who you say coodbye, I say hello, hello, hello,

I don't know who you say goodbye, I say hello.

I say high, you say bw,

You say why, and I say I don't know.

()n ....

You say coodbye and I say hello, hello, hello.
I don't know who you say coodbye, I say hello, hello, hello,

I don't know whe you say goodbye, I say hello.

Why, why, why, why, why,

Do you say goodbye.

Oh no.

You say coodbye and I say hello, hello, hello.
I don't know why you say goodbye, I say hello,

hello, hello,

I don't know why you say goodbye, I say hello.

You say yes, I say no,

You say top and I say go, go, go.

#### WIKIPEDIA

The Free Encyclopedia
"Hello, Goodbye"



#### Cover artwork for the single, as used in the US

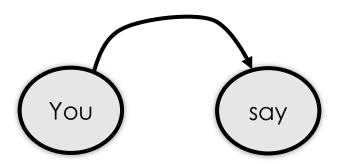
	Single by The Beatl
B-side	"I Am the Walrus"
Released	November 24, 1967

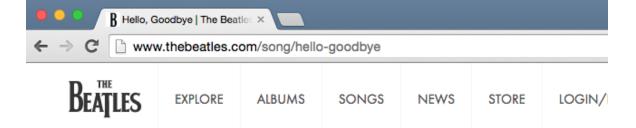
Format 7

Recorded 2 October - 2 November 1967

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Genre Pop rock
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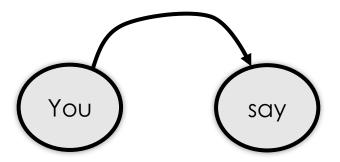


### Hello, Goodbye

SONG

You say yes, I say no, You say stop, and I say go, go, go,





# You say hello. I don't know why you say hello, hello. I say goodbye. Oh no. You say no, You

I say high, you say low,

You say why, and I say I don't know.

Oh no.

You say goodbye and I say hello, hello, hello.

I don't know why you say goodbye, I say hello, hello, hello,

I don't know why you say goodbye, I say hello.

Why, why, why, why, why,

Do you say goodbye.

Oh no.

You say goodbye and I say hello, hello, hello.

I don't know why you say goodbye, I say hello,

hello, hello,

I don't know why you say goodbye, I say hello.

You say yes, I say no,

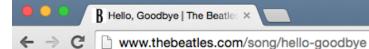
You say stop and I say go, go, go.



#### Cover artwork for the single, as used in the US

	Single by The Beatles
-side	"I Am the Walrus"
leleased	November 24, 1967
ormat	7"
lecorded	2 October - 2 November 1967
	EMI Studios, London
Genre	Pop rock
enath	3:27

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BEATLES

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### Hello, Goodbye

#### SONG

You say yes, I say no,

You say stop, and I say go, go, go,

Oh no.

You say goodbye and I say hello, hello, hello, I don't know why you say goodbye, I say hello, hello, hello,

I don't know why you say goodbye, I say hello.

I say high, you say low,

You say why, and I say I don't know.

Oh no.

You say goodbye and I say hello, hello, hello.

I don't know why you say goodbye, I say nello, hello, hello,

I don't know why you say goodbye, I say hello.

Why, why, why, why, why,

Do you say goodbye.

Oh no.

You say goodbye and I say hello, hello, hello.

I don't know why you say goodbye, I say nello,

hello, hello,

I don't know why you say goodbye, I say hello.

You say yes, I say no,

You say stop and I say go, go, go.

#### WikipediA

The Free Encyclopedia "Hello, Goodbye'



#### Cover artwork for the single, as used in the US

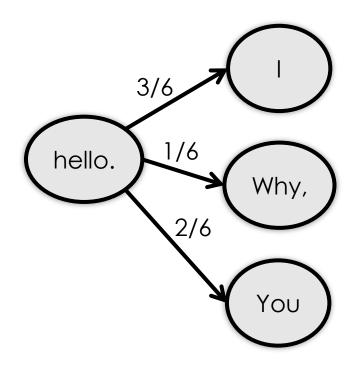
	Single by The Beatle
B-side	"I Am the Walrus"
Released	November 24, 1967

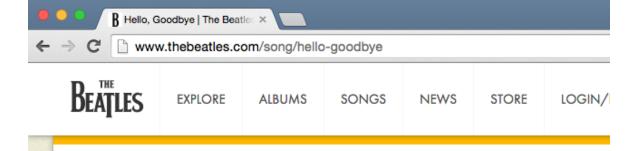
Format

Recorded 2 October - 2 November 1967

EMI Studios, London

Genre Pop rock Length 3:27 Label Parlophone Writer(s) Lennon-McCartney Producer George Martin Certification Gold (RIAA)





### Hello, Goodbye

SONG

You say yes, I say no,
You say stop, and I say go, go, go,
Oh no.

#### WikipediA

The Free Encyclopedia "Hello, Goodbye"

# You say hello. I don't know why you say hello, hello. I say goodbye. Oh no. You say no, You

You say why, and I say I don't know.

Oh no.

You say goodbye and I say hello, hello, hello. I don't know why you say goodbye, I say hello, hello, hello,

I don't know why you say goodbye, I say hello.

Why, why, why, why, why,

Do you say goodbye.

Oh no.

You say goodbye and I say hello, hello, hello.

I don't know why you say goodbye, I say hello,

hello, hello,

I don't know why you say goodbye, I say hello.

You say yes, I say no,

You say stop and I say go, go, go.



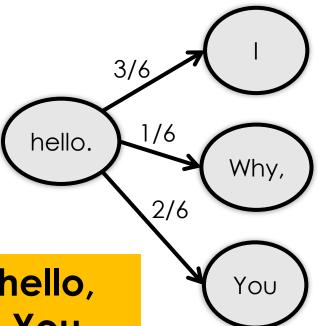
#### Cover artwork for the single, as used in the US Single by The Beatles

	3 ,
3-side	"I Am the Walrus"
Released	November 24, 1967
ormat	7"

Recorded 2 October - 2 November 1967

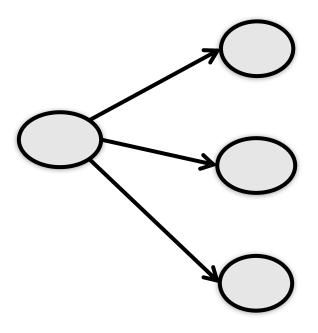
EMI Studios, London

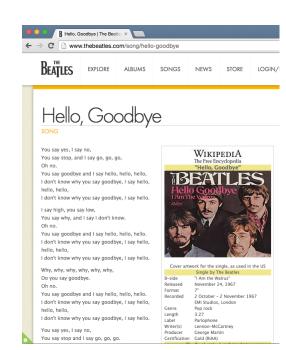
Genre	Pop rock
Length	3:27
Label	Parlophone
Writer(s)	Lennon-McCartney
Producer	George Martin
Certification	Gold (RIAA)



### Stage 1: Train

Build model based on data





# Stage 2: Generate Use model to predict next text