

How to Make a Twitter Bot in 1 Hour or Less

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Cultures, Societies and Global Studies

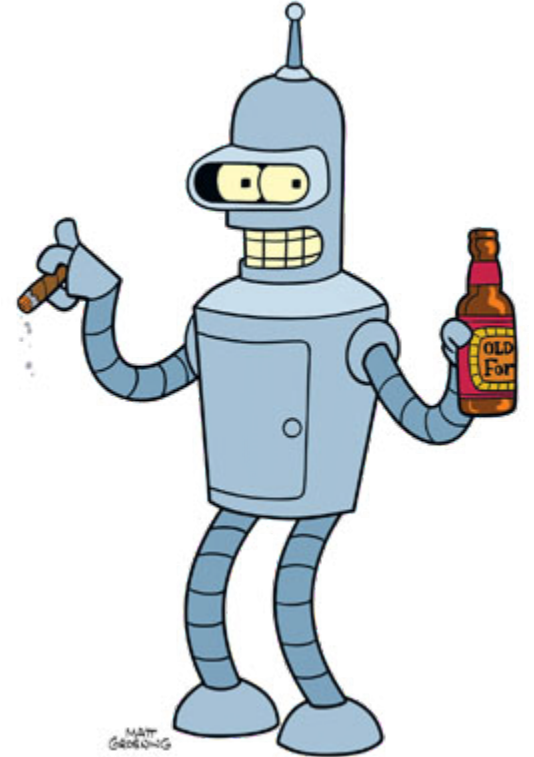
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What is a Twitter Bot?

- Automated Twitter account,
- Spam,
- Propaganda,
- Software application that posts content to Twitter, automatically either on a schedule or responding to specific conditions,
- Genre of Electronic Literature



Potential

"every figure of speech... and practically every linguistic structure... every work of literature, every writer's body of work, every literary movement, national literature...every data stream... Social interactions, conversations, calls and responses, platform-defined interactions (retweets, favorites, and so on) are all ready to be codified into algorithms and explored via bot."

(Leonardo Flores "[I !\[\]\(c507f772dba2b921f86777f01218e570_img.jpg\) Bots](#)")

Bots are procedural

A bot's content is automatically generated without human intervention, using a set of predetermined rules and procedures.

Allison Parrish “[Bots: A Definition and Some Historical Threads.](#)”

Bots are uncreative (unoriginal)

Writing that concerns itself with categorizing, remixing, and re-enacting pre-existing textual artifacts. Uncreative writing is produced not through “inspiration,” but by approaching an existing text and re-reading it, drawing out something new and unexpected in the process.

Allison Parrish “[Bots: A Definition and Some Historical Threads.](#)”

Bots are data driven

Bots today operate on much more data and use much more sophisticated statistical techniques than were available to 20th-century writers that used procedural techniques.

Contemporary botmakers regularly make use of large corpora, and in particular the corpus of Twitter itself.

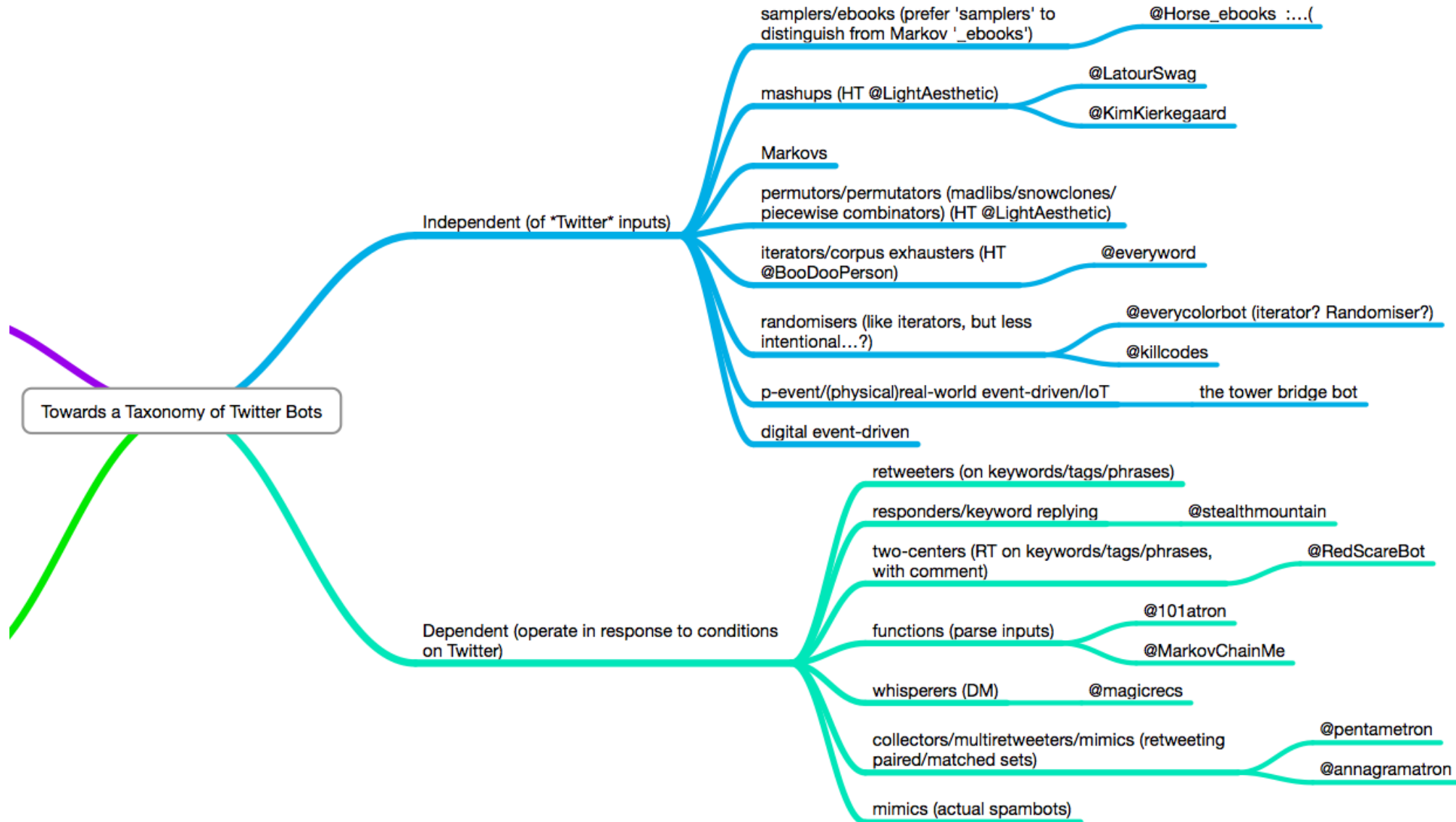
Allison Parrish “[Bots: A Definition and Some Historical Threads.](#)”

Bots are graffiti

The characteristic of bots that distinguishes them most readily from other kinds of poetry and art is that they are interventions in a public space.

Allison Parrish “[Bots: A Definition and Some Historical Threads.](#)”

Tully Hansen's "Taxonomy of Twitter Bots"



Why Twitter bots?

- Trolls
- Too short to say anything meaningful
- Deformation of language
- Current political climate

Authorial responsibility

@HaikuD2 by [John Burger](#)



HaikuD2 @HaikuD2 · 8h

Jamie and I reached •
A new level of friendship •
We had the same dream....
—@Misty__nightt #haiku

← ↻ 1 ★ 5 ...



HaikuD2 @HaikuD2 · 10h

Also big surprise •
The episode begins with •
A rainy setting
—@ThaFabz #haiku

← ↻ 1 ★ 7 ...



HaikuD2 @HaikuD2 · 13h

The Way People Are •
Is So Different From The Way •
Other People Are
—@whatthough #haiku

← ↻ 4 ★ 9 ...

@pentametron by Ranjit Bhatnagar

Pentametron
@pentametron

With algorithms subtle and discrete / I seek iambic writings to retweet.

Stratford-upon-Internet
pentametron.com
Joined March 2012

[Tweet to Pentametron](#)

28 Followers you know

Photos and videos

Tweets Tweets & replies Photos & videos

Pentametron Retweeted
babe @Tiny_Tae · 3h
Who wears a fitted to an interview???

Pentametron Retweeted
Adrienne Pope @adipope007 · 4h
I really want a new tattoo. #Tattoo

Pentametron Retweeted
(=OωO=) @lenkaGAYmine · 4h
i need yoichi by akiba so

Pentametron Retweeted
SuzyWithaY @1KissMyNeck · 4h
This silky khaki bomber jacket though 🍷

Pentametron Retweeted
Nadine Graham @MadFreshDaily · 5h
Tomorrow. Is. October. What the hell?!

@TwoHeadlines y
[Darius Kazemi](#)



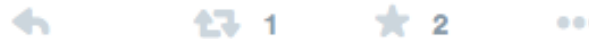
Two Headlines @TwoHeadlines · 5h

Yahoo shareholders still expect a massive October 2 tax bill



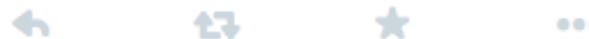
Two Headlines @TwoHeadlines · 6h

ConAgra Tells Schoolgirls to Beat the Boys



Two Headlines @TwoHeadlines · 7h

Ravens: Kanye West "Is Serious" About Running for President, But Didn't ...



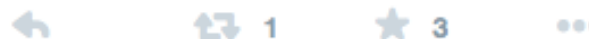
Two Headlines @TwoHeadlines · 8h

Chris Brown scores \$54M in funding; re-structures company



Two Headlines @TwoHeadlines · 9h

Donna Shalala -- I'm Not Going Down Without a Fight in Australia



@infinitedesserts by
[@getdizzy](#)



infinite deserts_ψ_ @infinitedeserts · 4h

.

~~~~~†~~~~



↻ 1

★ 5



infinite deserts\_ψ\_ @infinitedeserts · 7h

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Oo.

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∴ . ,

.



↻ 1

★ 3



infinite deserts\_ψ\_ @infinitedeserts · 10h

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\_\_\_\_\_

∴ , ∘ . . , ✦



↻ 1

★ 4



# @tiny\_star\_fields by [katie rose](#)

**\*\*tiny star fields\*\***  
@tiny\_star\_field

i produce a small window of stars periodically throughout the day and night // (inquires, @katierosepipkin)

[Tweet to \\*\\*tiny star fields\\*\\*](#)

16 Followers you know

**\*\*tiny star fields\*\*** @tiny\_star\_field · 2h

✦ ° .

. \* \* \* +

✦

← ↻ 166 ★ 116 ⋮

**\*\*tiny star fields\*\*** @tiny\_star\_field · 5h

° \* \* \* \*

. .

+ \* \*

✦ + \*

← ↻ 155 ★ 125 ⋮

**\*\*tiny star fields\*\*** @tiny\_star\_field · 8h

. \*

+ ●

\* \* +

. + \*

← ↻ 157 ★ 122 ⋮

# @StudiesBot by [Mark Sample](#)



The image shows a screenshot of the Twitter profile for @StudiesBot. The profile picture is a circular icon containing a line drawing of a human head with radiating lines, set against a background of a library with bookshelves. The bio states: "I have singlehandedly founded the following new scholarly fields." The location is "On a laptop in a coffeshop" and the website is "samplereality.com". There is a blue button that says "Tweet to Studies Bot". Below the bio, it says "6 Followers you know" and shows five profile pictures of followers, including one with the "MLA COMMONS" logo. The tweet list on the right shows four tweets, each with a reply icon, a retweet icon, a star icon, and a three-dot menu icon. The first tweet is "Digital Success Studies" (3h), the second is "Ethnoconversation Studies" (6h), the third is "Human Turtle Studies" (9h) with 1 retweet, and the fourth is "Medieval Colony Studies" (12h).

**Studies Bot**  
@StudiesBot

I have singlehandedly founded the following new scholarly fields.

📍 On a laptop in a coffeshop

🌐 [samplereality.com](http://samplereality.com)

[Tweet to Studies Bot](#)

6 Followers you know

MLA COMMONS

**Tweets**   Tweets & replies

**Studies Bot** @StudiesBot · 3h  
Digital Success Studies

**Studies Bot** @StudiesBot · 6h  
Ethnoconversation Studies

**Studies Bot** @StudiesBot · 9h  
Human Turtle Studies

**Studies Bot** @StudiesBot · 12h  
Medieval Colony Studies



# @ClearCongress by [Zach Whalen](#)

**TWEETS** 28.7K    **FOLLOWING** 474    **FOLLOWERS** 78

**Tweets**    Tweets & replies

**Cl.....** @ClearCongress  
Congressional tweets, filtered against the current congressional approval rate polling, as provided by @huffpostdata. (This is a bot by @zachwhalen)

Joined September 2013

Tweet to Cl.....

3 Followers you know

**Cl.....** @ClearCongress · 21m  
MT REPCICILLINE: [REDACTED] @ [REDACTED] Y ACT.  
#E [REDACTED]

**Cl.....** @ClearCongress · 51m  
MT REPRICHARDNEAL: [REDACTED] SCHOOL  
# [REDACTED]

# @everyword by A. Parrish

tingly everlasting everliving evermo  
ertor every everybody everyday every  
e everyplace everything everyway ev  
ct evicted evictee evicting eviction ev  
victors evicts evidence evidenced evi  
ing evident evidential evidentiary ev  
s evil evildoer evildoers evildoing evi  
nce evinced evinces evincible evincir  
te eviscerated eviscerates eviscerati  
tion evitable evite evocable evocatio  
re evocatively evocativeness evocativ  
r evoke evoked evoker evokers evokes  
evolution evolutionarily evolutionar

**everyword**  
@everyword

Twittered every word in the English language. Task began in 2007 and completed in 2014.

[decontextualize.com/2014/06/task-c...](https://decontextualize.com/2014/06/task-c...)

Joined November 2007

 **Tweet to everyword**

TWEETS **109K** FOLLOWING **12** FOLLOWERS **78.7K**

Tweets Tweets & replies

**everyword** @everyword · 7 Jun 2014  
**étui**

  1.1K  1.1K 

**everyword** @everyword · 7 Jun 2014  
**études**

  138  157 

# @NRA\_Tally by Mark Sample



The image shows a screenshot of the Twitter profile for @NRA\_Tally. The profile picture is a target with a handgun icon in the top left corner. The bio reads "Keeping score of the NRA's greatest hits." and the location is "Fairfax, Virginia". There is a blue button that says "Tweet to NRA Tally". Below the bio, it says "3 Followers you know" and shows three small profile pictures. The tweets section shows three tweets, each with a silhouette icon and a timestamp. The tweets describe gun incidents and NRA actions.

**NRA Tally**  
@NRA\_Tally  
Keeping score of the NRA's greatest hits.  
Fairfax, Virginia

[Tweet to NRA Tally](#)

3 Followers you know

**Tweets**   Tweets & replies

 **NRA Tally** @NRA\_Tally · 4h  
26 preschoolers gunned down in New York with a 9mm SIG Sauer semiautomatic. The NRA stops the CDC from researching gun violence.

   1   

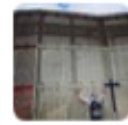
 **NRA Tally** @NRA\_Tally · 10h  
4 shoppers killed in Wisconsin with a FIE .380-caliber Star semiautomatic. The NRA steps up lobbying efforts.

 **NRA Tally** @NRA\_Tally · 16h  
6 tourists shot dead in San Ysidro with a 9mm Smith & Wesson 915 semiautomatic. The NRA says shooting ranges are fun for children.

@Dropthelbot by  
[Patrick Hogan](#) and  
[Jorge Rivas](#)



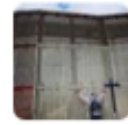
'Drop the I' Bot @DropthelBot · Aug 2

@angryamericanus People aren't illegal. Try saying "undocumented immigrant" or "unauthorized immigrant" instead.



'Drop the I' Bot @DropthelBot · Aug 2

@EllisonTeri People aren't illegal. Try saying "undocumented immigrant" or "unauthorized immigrant" instead.



'Drop the I' Bot @DropthelBot · Aug 2

@qprmicky People aren't illegal. Try saying "undocumented immigrant" or "unauthorized immigrant" instead.



'Drop the I' Bot @DropthelBot · Aug 2

@Danny\_n\_Stuff People aren't illegal. Try saying "undocumented immigrant" or "unauthorized immigrant" instead.



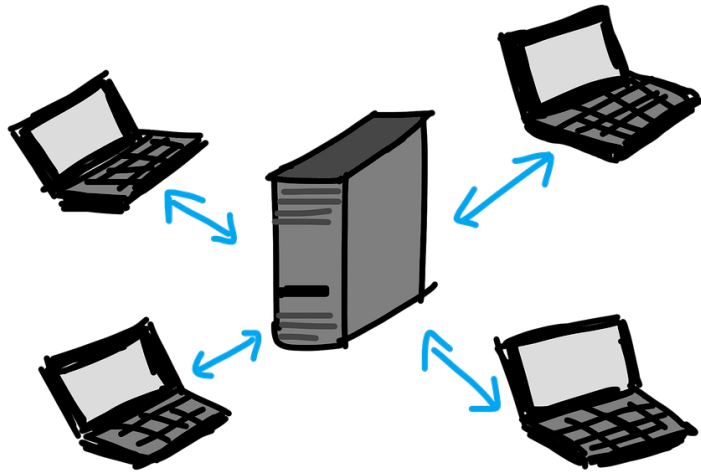
# Do they make sense?

- Part of the point of bots is to make sense (not just linguistic sense) out of what they generate
- Remediate dynamics of *cut-up* and experimental art
- Resistance might come from *impersonating* – Twitter bots unlike most other artworks co-exist with us in a public space

# Let's make a bot!

In less than one hour...


# A bot “lives” on a server but “works” on Twitter



## Cheap Bots, Done Quick!

This site will help you make a Twitterbot! They're easy to make and free to run.

To use it, [create a Twitter account](#) for your bot to run under and then sign in below. The bots are written in [Tracery](#), a tool for writing generative grammars developed by [Kate Compton](#). This site is run by [George Buckenham](#) - he can be contacted at [vtwentyone@gmail.com](mailto:vtwentyone@gmail.com).

 Sign in with Twitter

A screenshot of a Twitter profile for **Tiny Gallery** (@thetinygallery). The profile shows 1,470 tweets, 1 following, and 4,885 followers. The bio reads: "Tiny exhibits from the tiny gallery. deerful.space". The profile was joined in February 2016. The tweets section shows two tweets, both featuring a gallery grid image. The first tweet is from 4 hours ago and has 3 likes. The second tweet is from 10 hours ago and has 8 likes.

# Our tools:

- Tracery -- <http://www.brightspiral.com/tracery>
- Text editor
- Corpora <https://github.com/dariusk/corpora/tree/master/data>
- Cheap Bots Done Quick – <http://cheapbotsdonequick.com>
- Twitter account dedicated to bot



First we build the bot

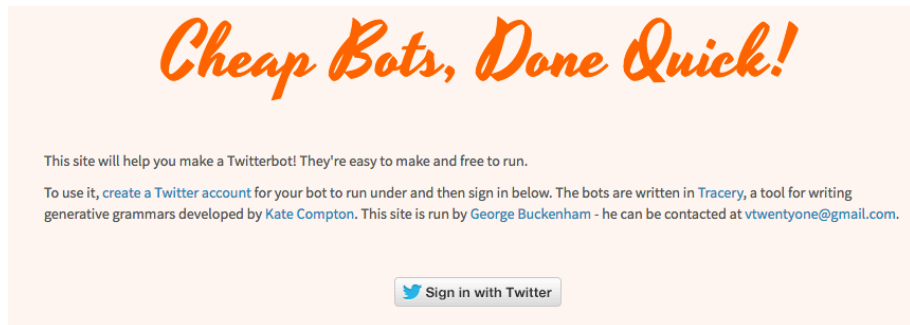


The image shows two parts of the development process. On the left is the 'my grammar' web interface, which has three input fields: 'name' with 'Bertram', 'Arabella', and 'Cecil' selected; 'occupation' with 'baker', 'wizard', and 'soldier' selected; and 'origin' with '#name# the #occupation#' selected. A 'new symbol' button is at the bottom. On the right is a tutorial titled 'Tutorial: Tracery'. It explains that Tracery is a JavaScript library for generating text. It shows a JSON object for a grammar: 

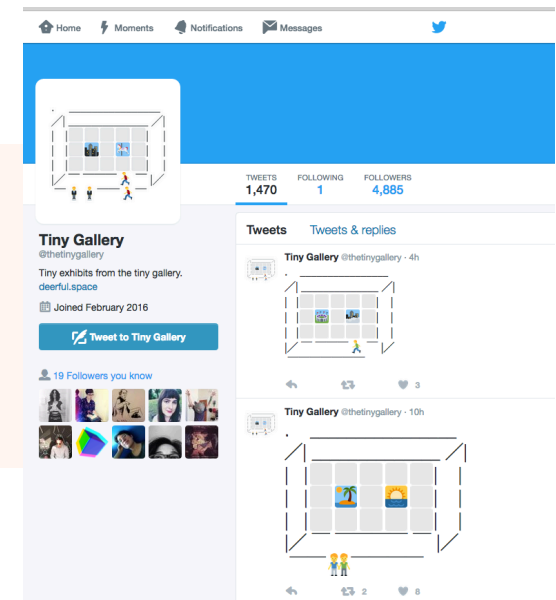
```
{ "animal": ["unicorn", "raven", "sparrow", "scorpion", "coyote", "eagle", "owl", "lizard", "zebra"] }
```

 and a 'reroll' button.

The we make it tweet



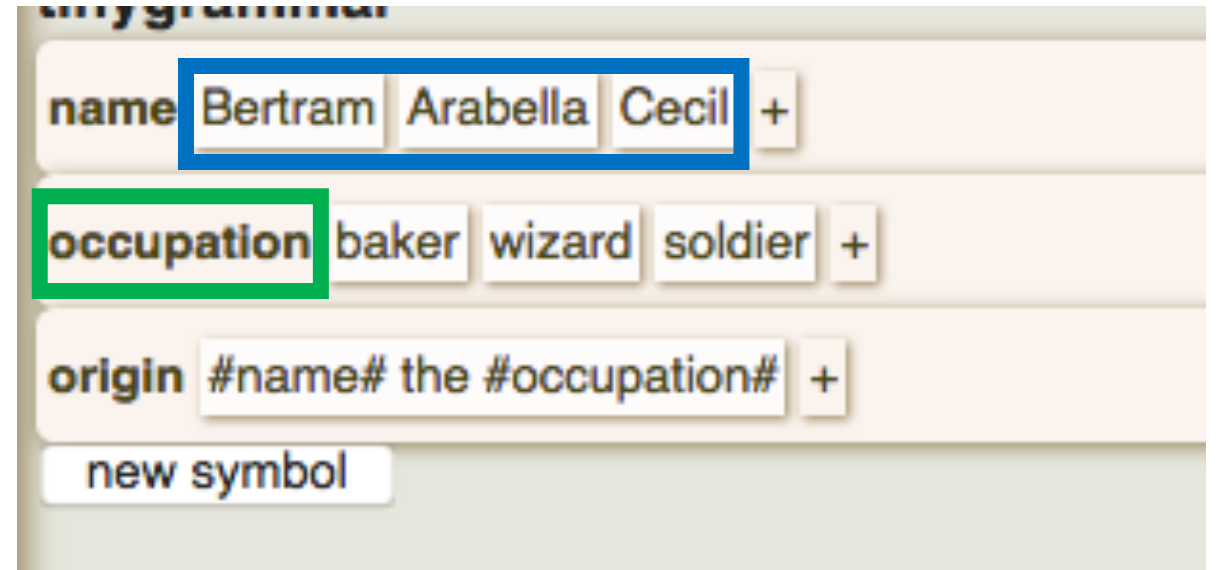
The image shows a website with the title 'Cheap Bots, Done Quick!' in orange cursive. Below the title, it says: 'This site will help you make a Twitterbot! They're easy to make and free to run. To use it, [create a Twitter account](#) for your bot to run under and then sign in below. The bots are written in Tracery, a tool for writing generative grammars developed by Kate Compton. This site is run by George Buckenham - he can be contacted at vtwentynone@gmail.com.' At the bottom, there is a 'Sign in with Twitter' button.



The image shows the Twitter profile for 'Tiny Gallery' (@thetinygallery). The profile bio says: 'Tiny exhibits from the tiny gallery. deerful.space'. It shows 1,470 tweets, 1 following, and 4,885 followers. There are two tweets visible, both featuring a gallery grid image.

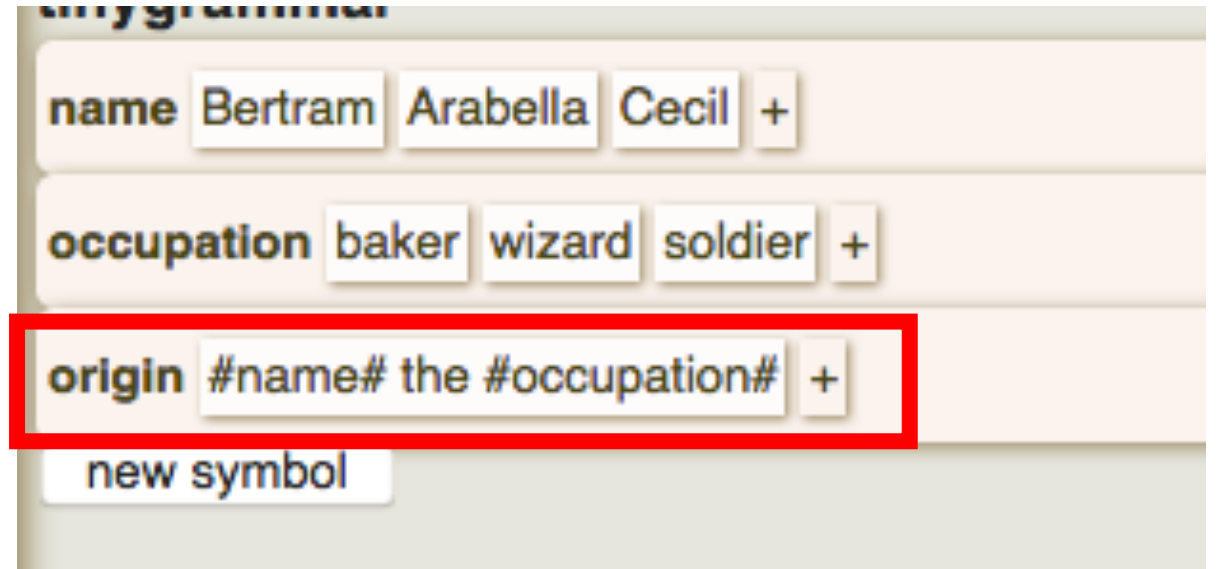
# 1. Tracery <http://www.brightspiral.com/tracery/>

- Interface that creates and structures the JSON file
- Tracery has embedded the generative engine that recombines the **values** included in each “**symbol**”



# 1. Tracery <http://www.brightspiral.com/tracery/>

- “**origin**” is reserved for the bot’s structure
- #\_\_\_# indicates randomized content from symbols
- The rest is constant, including spaces



# JSON file (JavaScript Object Notation)

- human-readable text
- data objects consisting of attribute–value pairs
- highly structured (commas, quotation marks, brackets)

```
{  
  "name": [  
    "Bertram",  
    "Arabella",  
    "Cecil"  
  ],  
  "occupation": [  
    "baker",  
    "wizard",  
    "soldier"  
  ],  
  "origin": [  
    "#name# the #occupation#"   
  ]  
}
```

# JSON file (JavaScript Object Notation)

- human-readable text
- data objects consist of attribute–value pairs
- highly structured (commas, quotation marks, brackets)

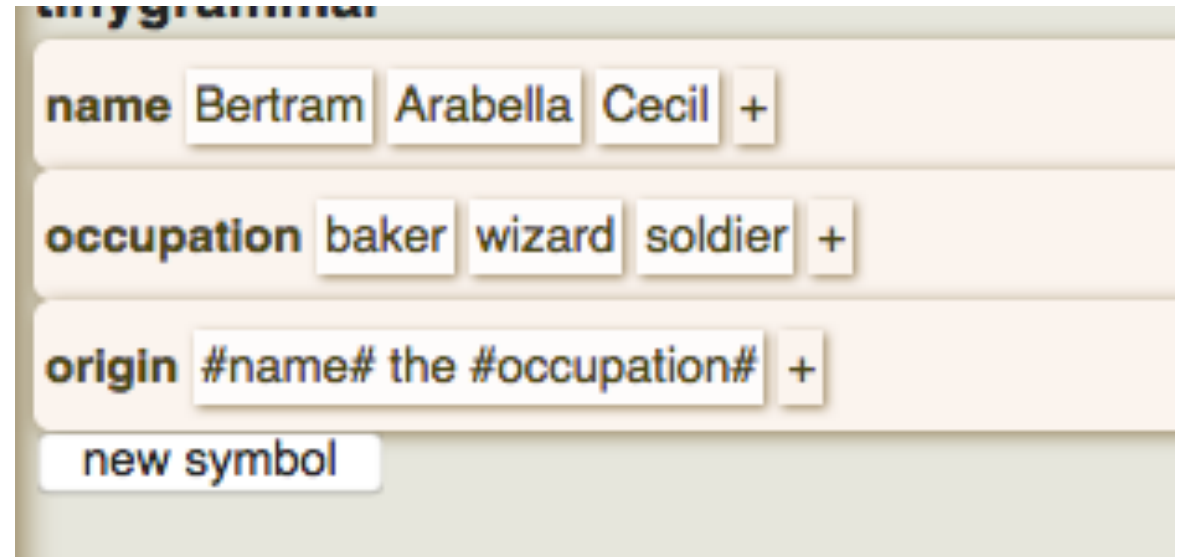


The image shows a screenshot of a website titled "Cheap Bots, Done Quick!". The website text includes: "This site will help you make a Twitterbot! They're easy to make and free to run. To use it, [create a Twitter account](#) for your bot to run under and then sign in below. The bots are written in Tracery, a tool for writing generative grammars developed by [Kate Compton](#). This site is run by [George Buckenham](#) - he can be contacted at [vtwentyone@gmail.com](mailto:vtwentyone@gmail.com)." There is a "Sign in with Twitter" button. The background features JSON code snippets: 

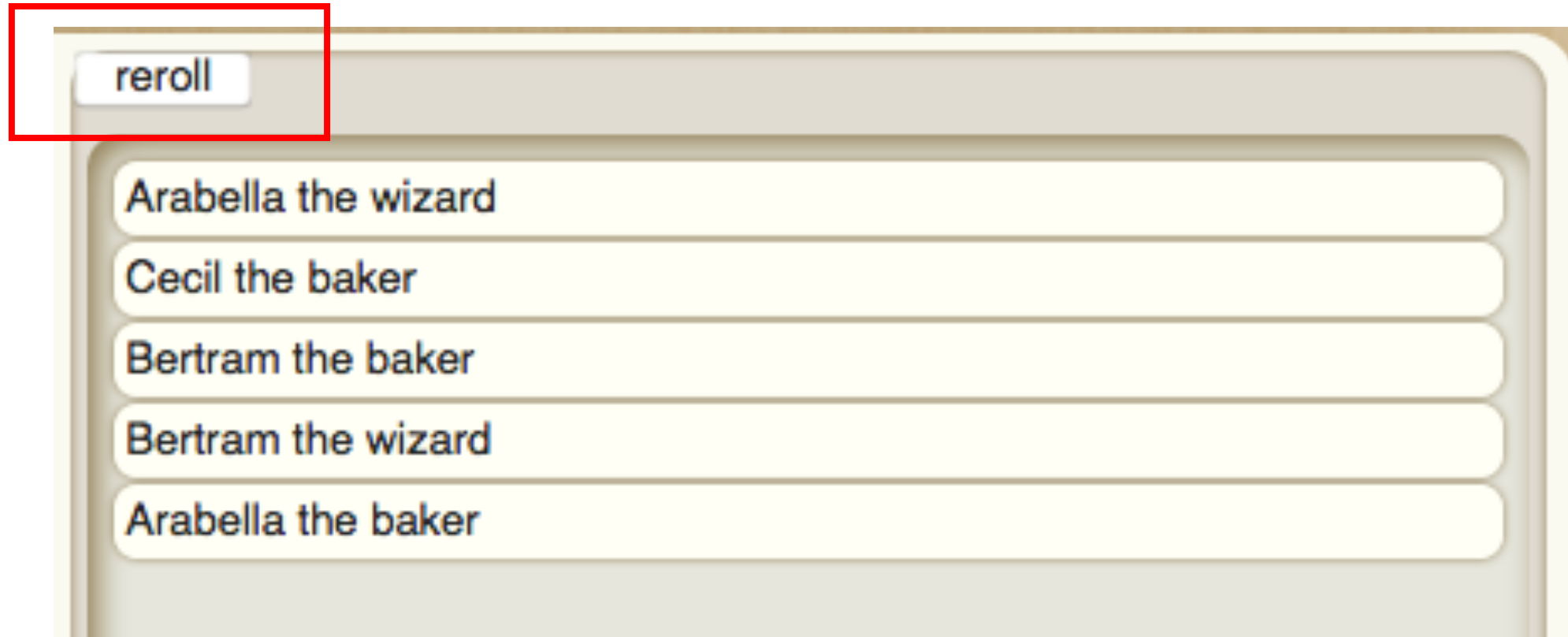
```
{  "name": [    "Bertram"  ],  "origin": [    "#name# the #occupation#"  ]}
```

# The same content

```
{  
  "name": [  
    "Bertram",  
    "Arabella",  
    "Cecil"  
  ],  
  "occupation": [  
    "baker",  
    "wizard",  
    "soldier"  
  ],  
  "origin": [  
    "#name# the #occupation#"  
  ]  
}
```



# Different combinations

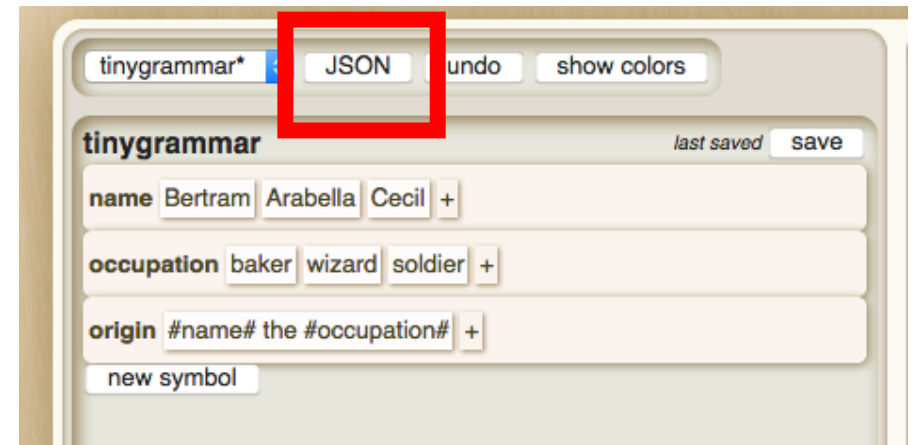


Experiment adding words and building more complex sentences

Tracery is not a work space, once you have a working idea, copy the .json output and continue in your text editor

Use the corpora available

<https://github.com/dariusk/corpora/tree/master/data>





# Match pizza toppings and kinds of beers

```
1 {
2   "description": "A list of pizza toppings.",
3   "pizzaToppings": [
4     "anchovies",
5     "artichoke",
6     "bacon",
7     "breakfast bacon",
8     "Canadian bacon",
9     "cheese",
10    "chicken",
11    "chili peppers",
12    "feta",
13    "garlic",
14    "green peppers",
15    "grilled onions",
16    "ground beef",
17    "ham",
18    "hot sauce",
19    "meatballs",
20    "mushrooms",
21    "olives",
22    "onions",
23    "pepperoni",
24    "pineapple",
25    "sausage",
26    "spinach",
27    "sun-dried tomato",
28    "tomatoes"
29  ]
30 }
```

```
1 {
2   "description": "A list of beer styles.",
3   "beer_styles": [
4     "aged beer",
5     "american rye ale or lager",
6     "american-style amber lager",
7     "american-style amber/red ale",
8     "american-style barley wine ale",
9     "american-style brown ale",
10    "american-style cream ale or lager",
11    "american-style dark lager",
12    "american-style ice lager",
13    "american-style imperial porter",
14    "american-style imperial stout",
15    "american-style india black ale",
16    "american-style india pale ale",
17    "american-style lager",
18    "american-style light lager",
19    "american-style low-carb light lager",
20    "american-style malt liquor",
21    "american-style marzen/oktoberfest",
22    "american-style pale ale",
23    "american-style pilsener",
24    "american-style premium lager",
25    "american-style sour ale",
26    "american-style stout",
27    "american-style strong pale ale",
28    "american-style wheat wine ale",
```

A #topping# pizza goes great with #beer#.

# A few useful modifiers

Put these at the end of symbols with a dot separating them:

- 's' for plural,
- 'ed' for past tense,
- 'capitalize' and 'capitalizeAll',
- '.a' to add a/an in front

'animal.s.capitalize' will make an animal plural and capitalize it

'pizzatoppings.a' will put a/an in front of it

More advanced options can be found here:

<http://www.crystalcodepalace.com/traceryTut.html>

## 2. A working idea (proof of concept) on Tracery

- On Tracery toggle the tab to see the JSON output
- Copy and paste it to your text editor (it'll be easier to spot errors there and add more values/data)
- This is the “body” of your bot and it's ready to move to the server

```
1  {
2      "name": [
3          "Bertram",
4          "Arabella",
5          "Cecil"
6      ],
7      "occupation": [
8          "baker",
9          "wizard",
10         "soldier"
11     ],
12     "origin": [
13         "#name# the #occupation#"
14     ]
15 }
```

### 3. Dedicated Twitter account

- You'll need an email. I recommend using one specific for your bot like [mynewbot@gmail.com](mailto:mynewbot@gmail.com)
- You'll need to sign up to Twitter with that account, pick a handle and a name for your bot.
- Verification might be needed too

## 4. Log in to Cheap Bots Done Quick

- Once logged in to your new bot account go to [cheapbotsdonequick.com](https://cheapbotsdonequick.com) and click on sign in with Twitter

## 5. “Move” your bot there

- Once logged in, copy paste your JSON output in the window
- If something isn't working, you'll get an error message at the bottom indicating the line # (this is easier to fix on your text editor)
- If everything is working you only need to set the frequency for your bot to tweet, and click on TWEET. Don't forget to save the changes.

# Responses

- New features in Cheap Bots Done Quick allow you to set up responses when someone tweets at your bot
- It uses the same grammar



Happy Tweeting!