

Jane Austen Generator

By Edith Johnston



What I Made

Time to Fill in the Blanks

Think of something creative!

Give me a city or place name

Albuquerque

Give me a male name

Zac

Give me a last name

Efron

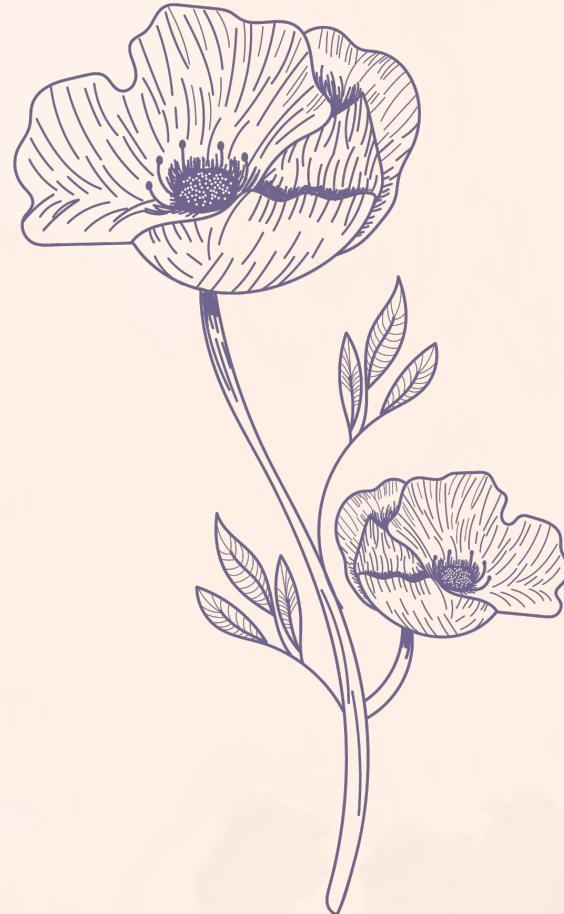


Submit

Proper Noun Handling

Types of Proper Nouns:

- Place names
- Boat names
- Authors
- Literature
- Countries
- Male, female and last names
- And more!



Proper Noun Handling

Replaced in Text By Keys:

- Place names → -PLC-
- Boat names → -BTS-
- Authors → -AUT-
- Literature → -LTR-
- Countries → -CNT-

Tools used:
python and regex



Text Generation

Two Methods

Markov Chaining

- Prefix of 3 words
- Artificial paragraph start and end tokens
 - Generate more natural paragraphs



Text Generation

Two Methods

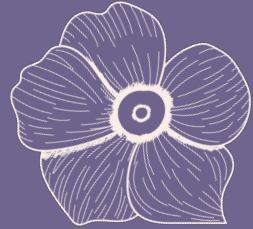
Neural Net Model

- Using embedding and Bidirectional LSTMs
- Steep learning curve for model

Tools used:

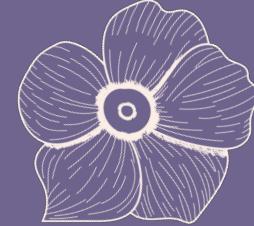
TensorFlow, FastText, Word2Vec,
Gensim, NLTK, Google Colab





Text Generation

Two Methods



Neural Net Sample Output

dear determined and shall
disguise subject dejection honour
it disclaimed -LAST NAME- much
his as a expressed accidental the
he -MALE NAME- .

Markov Sample Output

"Yes; and they have so many pretty
ways. They will come and stand by
my chair, and say, 'Grandpapa, can
you give me your opinion."



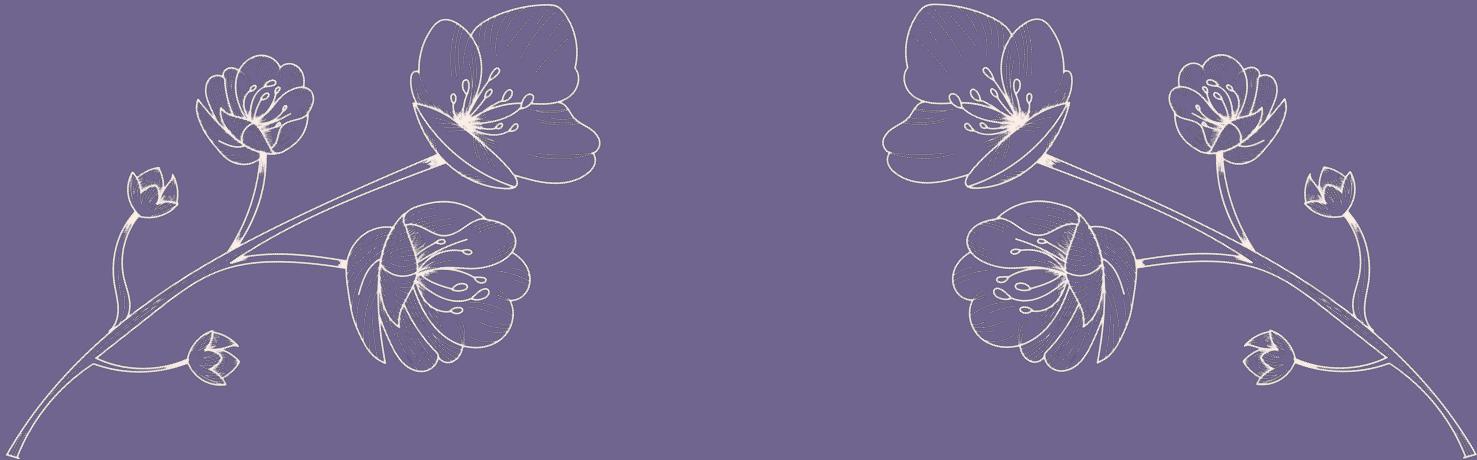
Future Work

More Authors with Distinct Styles

Improve Neural Net Model



Deploy the app



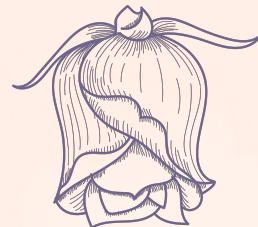
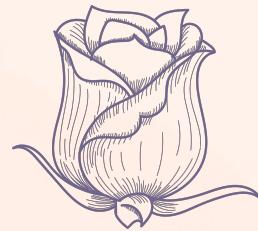
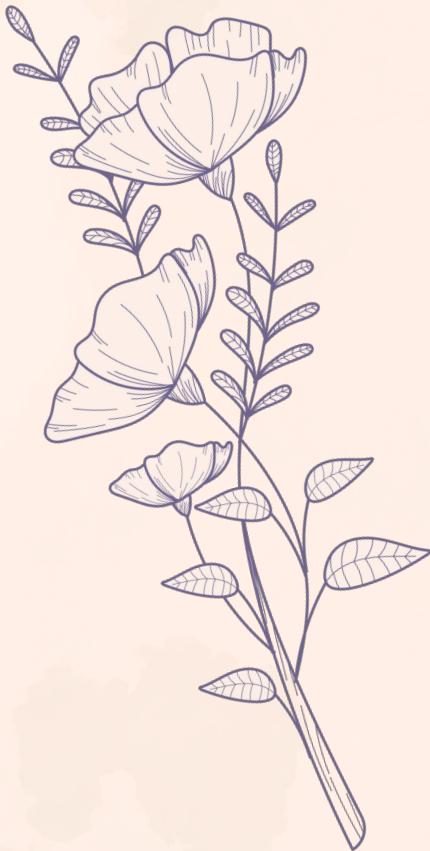
Thank you for your time

By Edith Johnston

LinkedIn: <https://www.linkedin.com/in/edith-johnston/>

Github: <https://github.com/edithalice>

Appendix



Data

Total Proper Nouns: **804**

Number of these
that appear less
than 5 times: **480**



Embedding Layer

100 neurons

Bidirectional LSTM Layer

100 neurons each direction

Backwards LSTM Layer

200 neurons

Two Dense Layers

The first with 150 neurons and
the second with neurons of vocab size

Neural Net Structure

Final accuracy after approx
400 epochs: **0.4924**



Proper Noun Types

- Place names
- Boat names
- Authors
- Literature
- Countries
- Male names
- Female names
- Last names
- Languages
- Months
- Nationalities
- Weekdays
- Holidays
- Bodies of water
- Newspapers



