"*On the Internet, nobody knows you're a bot.*"

Aaron Wilson, Chicago, Ill.

"Worse than a cold. It's a common cold."
Donald B. Benson, San Jose, Calif.

"The robe is supposed to open in the back."
Adam Lichstein, Brooklyn, N.Y.

"On the bright side, I've got some good news for the Prince."
Dan Davis, Medford, Mass.

"You said you were in the mood for a little Italian."

UNFUNNY　　SOMEWHAT FUNNY　　FUNNY

"And lastly Father, I bit the mailman."

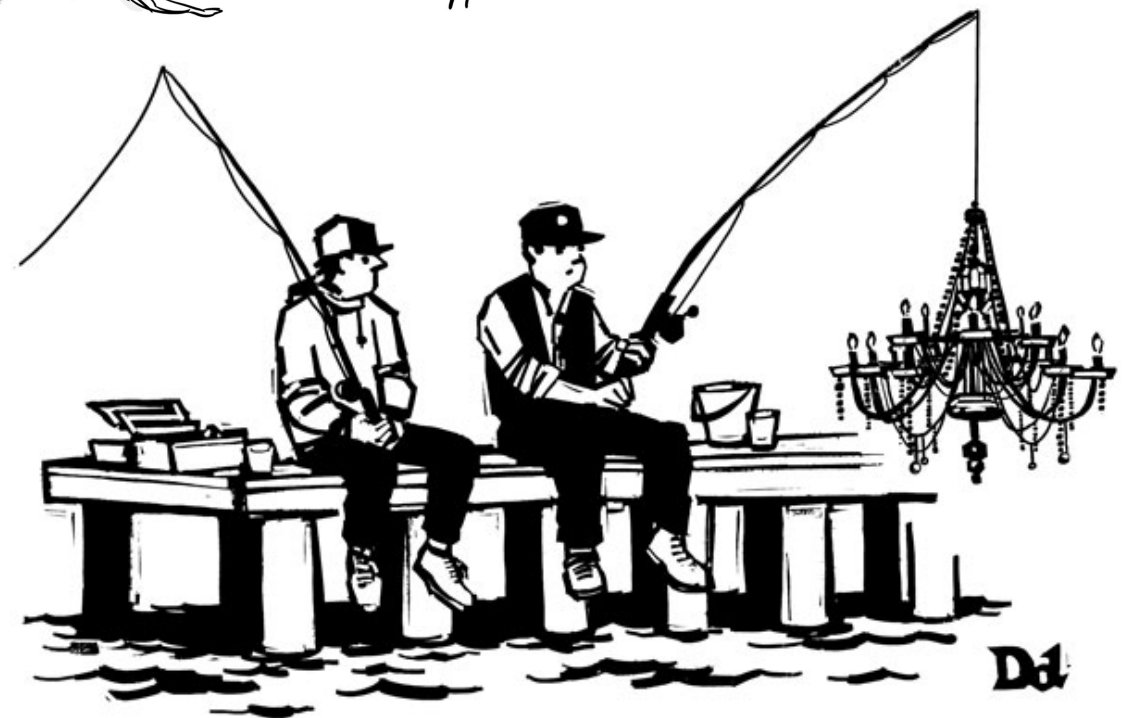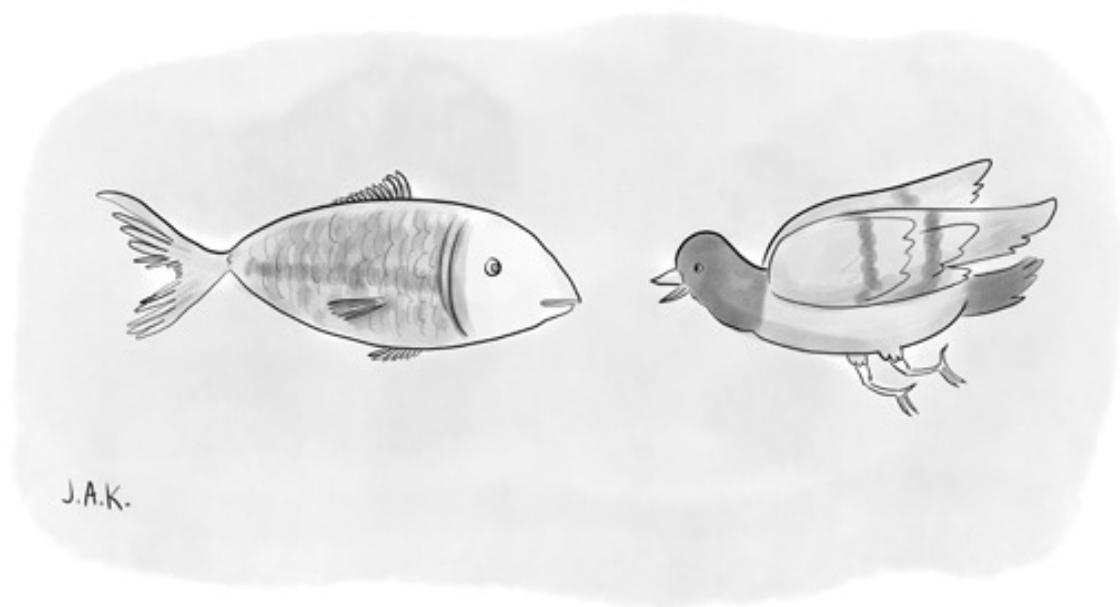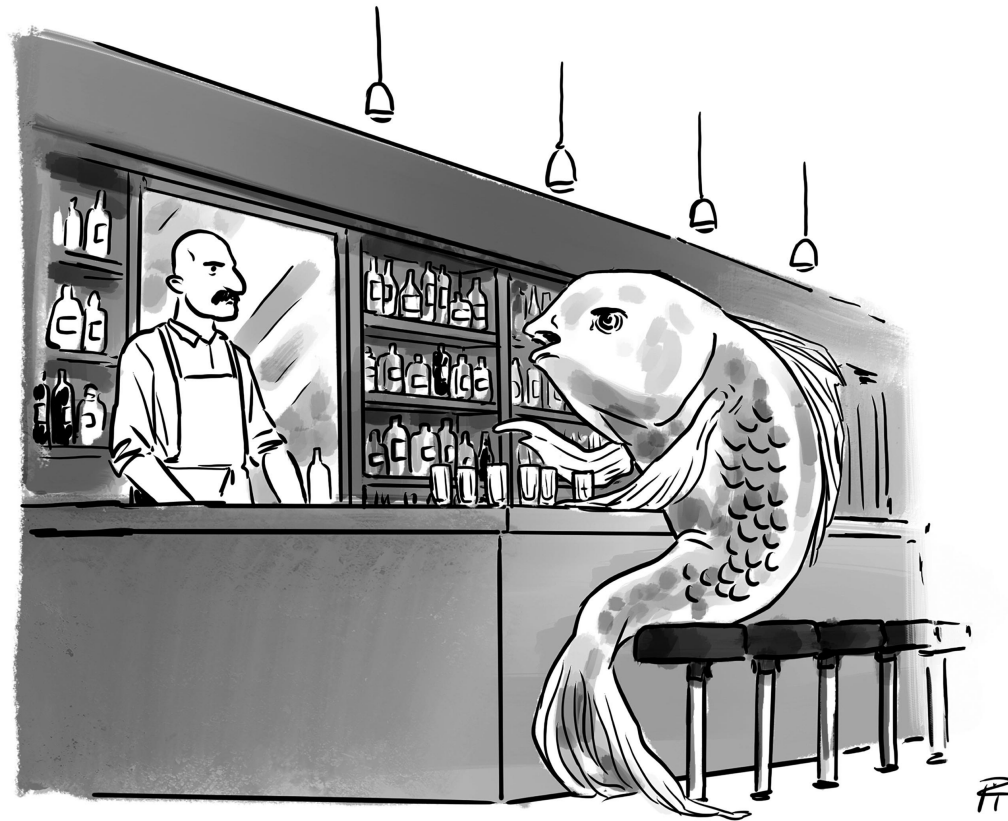↓ **Tokenize and stem**

`and last father i bit the mailman`

↓ **Vectorize**

`[0., 0., 0., 0.01157, 0., 0.00618, 0., ...]`

"Fish"	"Knights"	"Piano"	"Death"	"Food"	"Birds"
fish	knight	piano	death	cake	nest
water	armor	play	grim	cook	bird
bait	shine	tune	lunch	books	duck
drink	suit	music	reap	gluten	hitchcock
swim	sir	tuner	scythe	psst	seed
lure	joust	concerto	hey	bake	egg
worm	armor	sonata	reaper	dough	nester
catch	date	mountain	kill	grill	pigeon
fly	wear	bach	dead	chef	rent

"Fish"

"Crime"

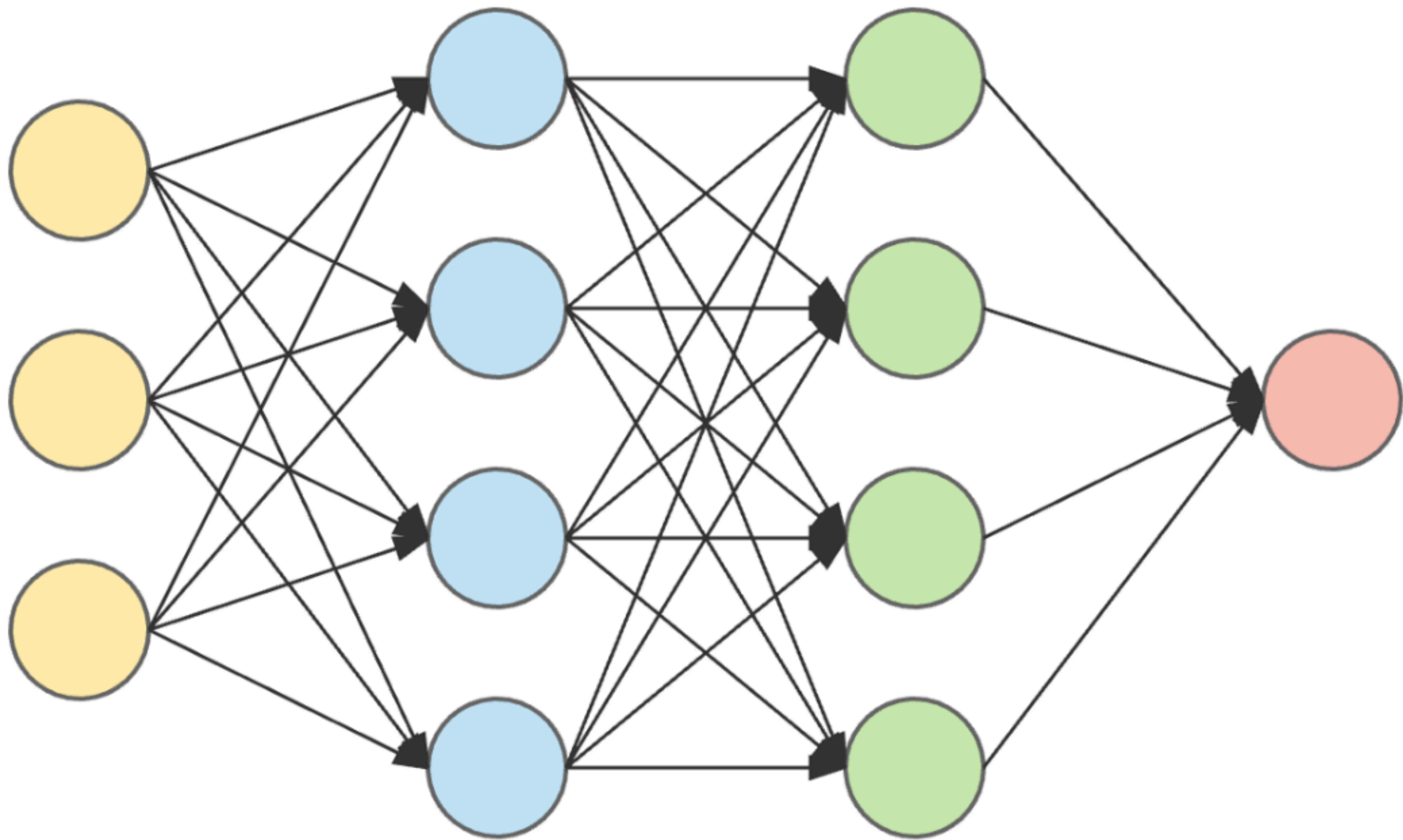|				
Art	4	Knights	2
Birds	3	Party	2
Cats	3	Piano	2
Crime	3	Religion	4
Death	5	Restaurants	4
Doctors	7	Rodents	2
Dogs	6	Subway	3
Fish	3	Work	9
Food	8	Other	25
Games	3		

Total   **98 cartoons**

Deep
LEARNING
TIME

Credit: [Arden Dertat](#)

Five minutes of training:

"I have to seen the lamp, I wish you wish for a confer tarts."

One hour of training:
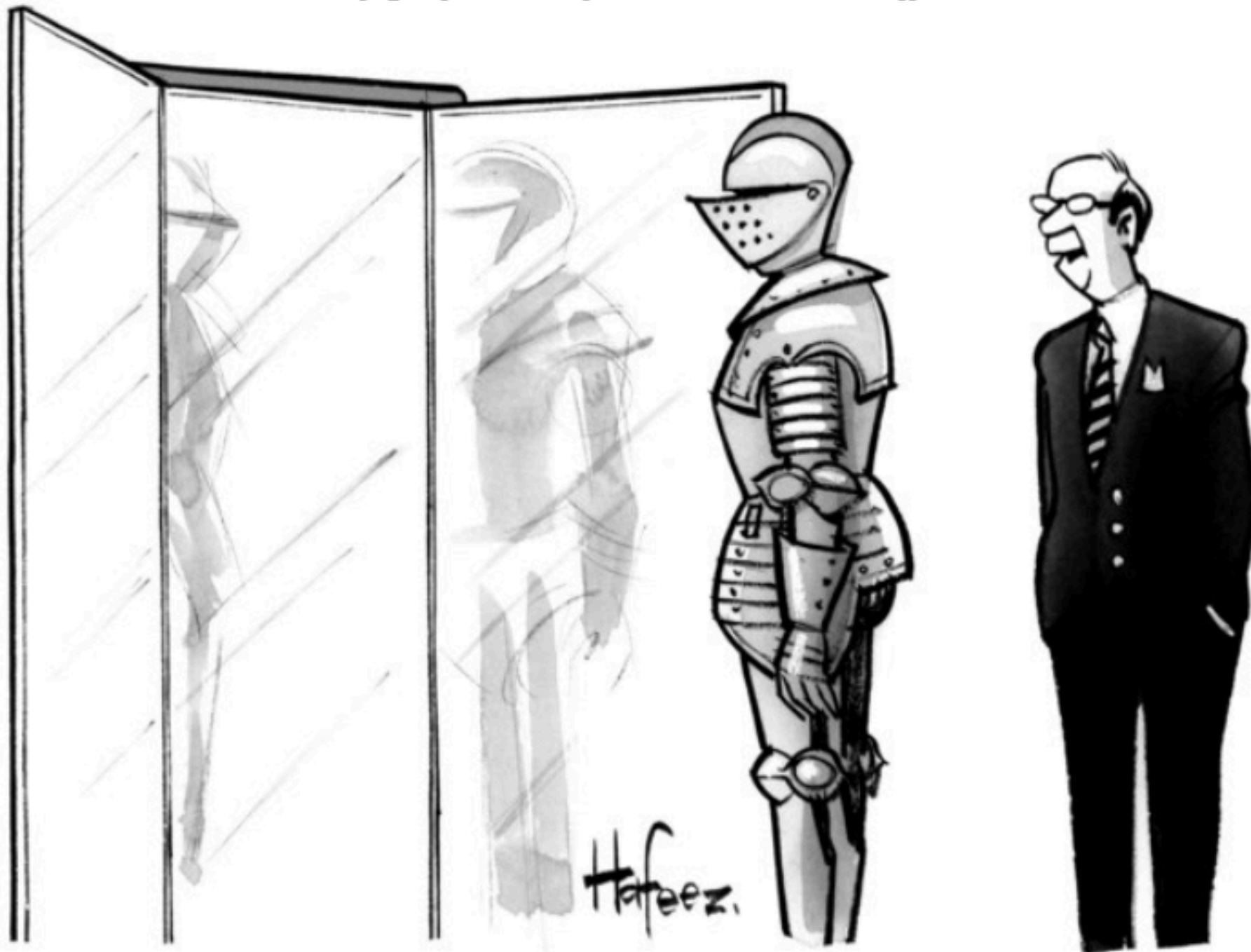
"I can grant you three wishes. I don't do bagels."

caption-ai.herokuapp.com

Select a category:

[Knights ⇕]

[Generate!]

"My profile said you were a little stiff."

"On the Internet, nobody knows you're a dog."

All data and cartoon images were obtained from NEXT ML's public Github repository. Cartoons belong to The New Yorker magazine.

Caption data was processed using MongoDB, pandas, NLTK's Snowball stemmer, and scikit-learn's vectorization, decomposition, and clustering tools.

Neural network text generation used Max Woolf's textgenrnn, built on top of Keras and TensorFlow. Training was done on an AWS EC2 p2.xlarge Deep Learning AMI instance for a mere 90 cents per hour.

The Heroku app was built with Flask, gunicorn, jQuery, blood, and tears.