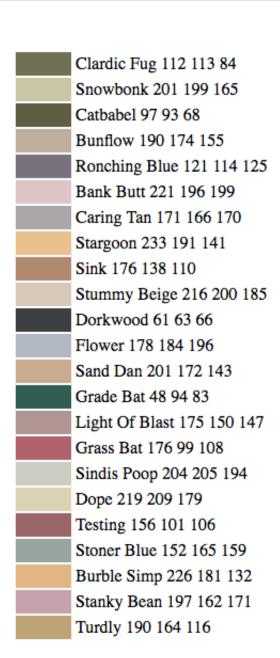


Attractive names of paint colors as delivered by a neural network

May 22 2017, by Nancy Owano



Credit: lewisandquark.tumblr.com



x(Tech Xplore)—Many people walking through the paint department of a store will be thinking of just that, picking up some paint with names like Comfy Cabbage or Sand Dune and getting out. If you are Janelle Shane, though, you are a research scientist who can't see what's being presented as paint names without also wondering how artificial intelligence can turn up the volume.

Janelle Shane? *TechCrunch* described her as "a researcher and flautist who occasionally 'plays with <u>neural networks</u>.'"

More specifically, she is a research scientist in industry, working on laser beam <u>steering</u>.

Let Shane explain her question which started her off: "So if you've ever picked out <u>paint</u>, you know that every infinitesimally different shade of blue, beige, and gray has its own descriptive, attractive name. ...But given that the human eye can see millions of distinct colors, sooner or later we're going to run out of good names. Can AI <u>help</u>?"

She decided to explore a neural network approach to find out. "Could the neural network learn to invent new paint colors and give them attractive names?" (Make even names like Tuscan sunrise and blushing pear look Periwinkle Pale?)

Neural network attempts are often reported as impressive. Her results were described as hilarious. Bank Butt. Grass Bat. Hurky White. And *TechCrunch* sat up and took notice of other names, Horble Gray. Burf Pink, or "How would you like to paint your house in a nice 'dorkwood' or 'stanky bean'?"



Soreer Gray 121 121 110

Sane Green 121 125 190

Reree Gray 213 220 122

Canter Green 140 120 120

Rererte Green 223 116 120

Conk Green 185 212 221

Sole Gray 181 112 121

Credit: lewisandquark.tumblr.com

Her neutral network attempt to name colors in a paint-naming project may have caused some laughs but turned into an interesting post on her site, "Postcards from the frontiers of science."

In her Frequently Asked Questions section, one question posted to her was What neural network framework are you using?

She said she is using a <u>neural</u> network framework, which is open source, char-rnn. Actually there are others, she said, but she recommended char-rnn as a starting point "if you have a Linux or Mac OS system and want to start playing as quickly as possible.")

Her path to the names? Devin Coldewey in *TechCrunch* described the path: "The network was given a list of 7,700 paint names and their corresponding RGB values, and set to work trying to suss out the hidden connections that govern these interesting yet occasionally obscure appellations."

She herself told her site visitors that "For this experiment, I gave the neural network a list of about 7,700 Sherwin-Williams paint colors along with their RGB values. (RGB = red, green, and blue color values) Could



the neural network learn to invent new paint colors and give them attractive names?"

At first, said Coldewey, the system "seemed to be putting together a rudimentary logic."



Credit: lewisandquark.tumblr.com

Shane in her own account of what happened said that by the second checkpoint, the neural network could properly spell green and gray but did not seem to know what <u>color</u> they were.

Later in the training process, the neural network was able to figure out some of the basic colors but not reliably.



Her own report card:

"In fact, looking at the neural network's output as a whole, it is evident that: The neural network really likes brown, beige, and grey. The neural network has really really bad ideas for paint names."

Coldewey's report card was graceful enough, as he said, "perhaps this particular intelligence needs a little more gestation time."

Annalee Newitz at *Ars Technica* wrote, "I cannot wait to live in a world painted by robots. Thanks to Shane's work, we are one step closer to knowing what that will be like."

More information: <u>lewisandquark.tumblr.com/post/ ... ed-by-neural-network</u>

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