



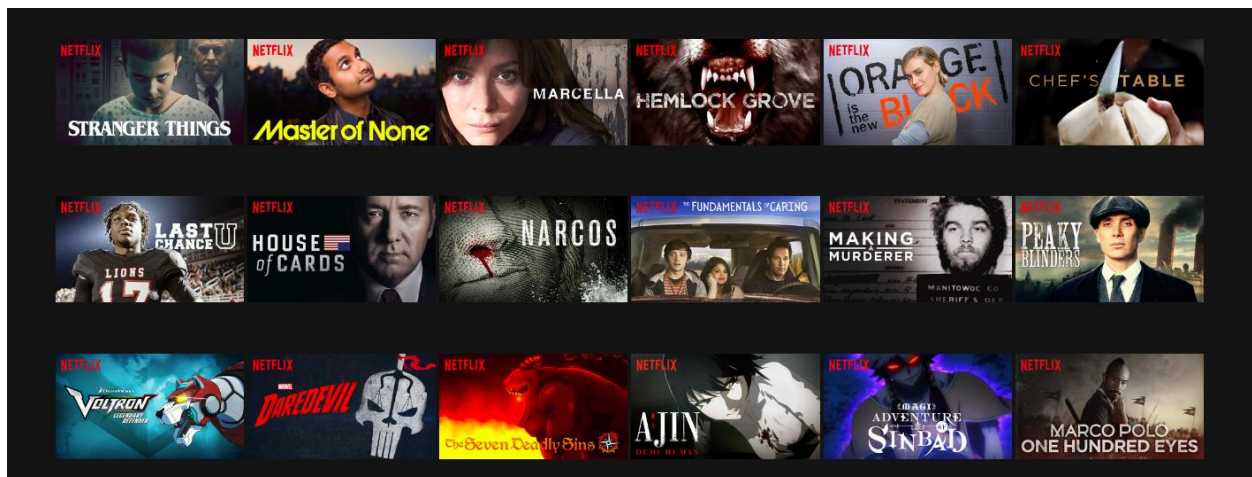
Epsilon Theory

DOWN THE RABBIT HOLE | BY NEVILLE CRAWLEY

A Taxonomy of Humans, Evolution and Aliens

Netflix recommendation system

High level, but still interesting, overview of [how Netflix recommendation system works](#) from Wired. Short answer: "The three legs of this stool would be Netflix members; taggers who understand everything about the content; and our machine learning algorithms that take all of the data and put things together." The tagging piece is probably the most interesting ("dozens of in-house and freelance staff who watch every minute or every show on Netflix and tag it. The tags they use range massively from how cerebral the piece is, to whether it has an ensemble cast, is set in space, or stars a corrupt cop") and point to the continued need for **'human-in-the-loop'** content tagging for machine learning systems.



A taxonomy of humans according to Twitter

Sam Levine, an artist and programmer from Brooklyn, scraped Twitter's ad creation page to produce a full list of all user segments, their names, descriptions and user count: [a taxonomy of human beings according to Twitter](#) and its data brokers. My favorite tag: "Buyers of deli bulk meat."



Emergent physics behind evolution

Fascinating interview with Nigel Goldenfeld, Director of the NASA Astrobiology Institute for Universal Biology, on [Seeing Emergent Physics Behind Evolution](#):

"People tend to think about evolution as being synonymous with population genetics. I think that's fine, as far as it goes. But it doesn't go far enough. Evolution was going on before genes even existed, and that can't possibly be explained by the statistical models of population genetics alone. There are collective modes of evolution that one needs to take seriously, too. Processes like horizontal gene transfer, for example."

The aliens on Earth

Continuing on the theme of evolution, this is a fascinating [piece](#) on ctenophores as aliens on earth:

"Leonid Moroz has spent two decades trying to wrap his head around a mind-boggling idea: even as scientists start to look for alien life in other planets, there might already be aliens, with surprisingly different biology and brains, right here on Earth. Those aliens have hidden in plain sight for millennia. They have plenty to teach us about the nature of evolution, and what to expect when we finally discover life on other worlds."



Chinese science fiction

And finally, on the subject of aliens, I can not recommend strongly enough Liu Cixin's [The Three-Body Problem](#) (三体) science fiction trilogy, which recently won a Hugo Award. Deeply intelligent and expansive science fiction on the scale of Asimov's Foundation series. Without giving too much of

a spoiler, my favorite quote is from the second book in the trilogy (The Dark Forest) which turns **Johann Wolfgang von Goethe's** "If I love you, what business is it of yours?" into "If I destroy you, what business is it of yours?"

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