

Comments on “Deep Learning: A critical appraisal”

...

Ivan Marin
Daitan Group

The Article

Deep Learning: A Critical Appraisal

Gary Marcus¹
New York University

Limits on the scope of deep learning

Gary lists 10 challenges that current deep learning approaches face. For example:

- Deep learning is data hungry
- Deep learning has not been sufficient transparent
- Deep learning has been difficult to engineer with
- Deep learning has not been capable of distinguish causation from correlation
- Deep learning has struggled with open-ended inference

... and some backlash

Of course there was backlash from deep learning researchers:



Thomas G. Dietterich
@tdietterich

Follow

Disappointing article by [@GaryMarcus](#). He barely addresses the accomplishments of deep learning (eg NL translation) and minimizes others (eg ImageNet with 1000 categories is small ("very finite") ?). 1/

Gary Marcus @GaryMarcus

Top 10 reasons #deeplearning isn't getting us to artificial general intelligence. A critique of deep learning, 5 years into its resurgence, by @garymarcus arxiv.org/abs/1801.00631

11:02 PM - 3 Jan 2018

164 Retweets 422 Likes



10 164 422



Yann LeCun @ylecun · 22h

Replying to [@GaryMarcus](#) [@tdietterich](#)

Tom is exactly right, actually.

1 2 15



Yann LeCun @ylecun · 22h

Replying to [@togelius](#) [@GaryMarcus](#)

It's all wrong though. It would be less wrong if all instances of "deep learning" were replaced by "supervised learning" in his piece.

4 5 21



Yann LeCun @ylecun · 22h

Replying to [@poolio](#)

The number of valuable recommendations ever made by Gary Marcus is exactly zero. Criticisms abound, though.

3 4 30

Artificial General Intelligence

Marcus argues that the the latest advances in deep learning are still limited to reach the goal of Artificial General Intelligence.

There are several schools of thought for what should be the way of reaching AGI.

The discussion continues

<https://arxiv.org/abs/1801.00631> (Deep Learning: A Critical Appraisal)

<https://medium.com/@GaryMarcus/in-defense-of-skepticism-about-deep-learning-6e8bfd5ae0f1> (Gary Marcus answer to critics)

<https://blog.acolyer.org/>

<https://analyticsindiamag.com/is-all-the-excitement-around-deep-learning-justified-not-according-to-deep-learnings-biggest-skeptic-gary-marcus/>

<https://medium.com/syncedreview/gary-marcuss-deep-learning-critique-triggers-backlash-62c137a47836>


<https://plus.google.com/+YannLeCunPhD/posts/IRnZwMbK7BR> (from 2012!)

<https://medium.com/intuitionmachine/has-deep-learning-hit-a-wall-ec6a7cc82cb3>

<https://twitter.com/GaryMarcus/status/948364570120335363>


The discussion continues...

ents Buscar no Twitter

**Gary Marcus**
@GaryMarcus Seguir




Google CEO, January 2018: “AI is more profound than fire and electricity”





Google Duplex, May 2018: groundbreaking AI will “help users make restaurant reservations, schedule hair salon appointments, and get holiday hours.”


**Google Duplex: An AI System for Accomplishing Real-Wo...**
Posted by Yaniv Leviathan, Principal Engineer and Yossi Matias, Vice President, Engineering, Google A long-standing goal of human-comput...
ai.googleblog.com

14:50 - 10 de mai de 2018

74 Retweets 201 Curtidas

 12  74  201

**Andrew Jennings** @andyjennings · 12 de mai
Em resposta a @GaryMarcus
cheap shot. Do better.
 1   1

**Gary Marcus** @GaryMarcus · 12 de mai
stay tuned for a lengthier discussion
