My forecast of ML development in the next ten years

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December 3, 2023

1 What trends and topics will impact scientific research?

1.1 Generative models

Generative models will continue evolving; we'll see more and more NLP and CV models that can completely replace professional translators and painters. I think we're likely to see new efficient devices that might translate and produce human speech from one language to another during a conversation between people. The same goes for computer vision. New sophisticated models will be developed, and they will be able to generate anything we give them as input.

1.2 Explainability and Interpretability

There's a chance that scientists will come up with new theoretical approaches in terms of machine learning. If they really succeed in it, we might make a big step towards real robust, explainable, and interpretable models.

1.3 ML in Healthcare

There will be lots of devices for diagnostics in hospitals and smartphone applications with personalized recommendations on lifestyle a person should stick to, supplements he/she should take, etc. The better models are explained and interpreted, the more they'll be used in the healthcare industry.

2 What tools will be most useful in academic and industrial research?

It seems to me that it'll be tools like ChatGPT that will help researchers with summarizing the whole papers, suggesting different ideas for further research based on the information inside the papers, etc.

3 What is my role in the profession, how I will develop my career?

I'm planning to work on non-invasive neural interfaces as a researcher. At this point, it seems like a very interesting and promising direction for, at least, the next 10 years.