Who uses Machine Learning and Why?

So as discussed what exactly is machine learning? , now next step to know is who use machine learning and what's exactly there purpose to use these technique?

As expected, data is the new fuel that runs and owns world. Every company/platform tries to get as much as data that they can use to give you more personalised experience.

So clearly nowadays, scope of Machine Learning is in almost every field ranging from small business to big social media organization storing petabytes to exabytes.

The realm of machine learning is changed now, you no longer need to wait for days or weeks to train your model, you don't need highest level of knowledge of domain or programming or math(obviously basic to intermediate knowledge is expected to be a good machine learning engineer), we have a lots of 3rd party libraries to make our work easy and we have some of best GPUs available to train our model faster.

But what do these companies do by collecting your data and exhausting their resources on your data? Are there efforts visible?

Well, the answer is YES! You might have noticed automated cars, recommender systems in Netflix, personalised ads on Facebook/Instagram, "people buy this together" on Amazon/Facebook, google lens, self driving cars by tesla/google, google speech to text converter, fake news detection techniques, recognising handwriting patterns these all are real time machine learning techniques.

Now based on problem task you can classify them as supervised, unsupervised or reinforcement learning. Or you can do classification using Machine Learning itself xD. (Sorry for that PJ)

Big organization like Facebook, Amazon, Netflix stores your data and preprocess it. Since the source of data is directly you and the data stored will be in structural format as we aren't extracting it so it is easy for them to preprocess it and hence apply machine learning algorithms. They use Machine Learning to personalize the user's experience and in addition help to personalize the experience of other users having same interest as others.

Now apart from such big organizations, why it can be important for small organizations? Because it will help them to put resources on the exact field they're lacking at. By collecting and modelling data they've, they can easily get insights and can start working on the weaker section of their company. Now they might get data from users or collect it from social sites that's completely different topic.

What all is required for a successful Machine Learning system?

- 1. Data preparation (includes data collection and preprocessing)
- 2. **Machine Learning engineer** with good domain, statistical, programming knowledge.
- 3. A **powerful machine** with good GPU.

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Cheers.

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<u>Canonical link</u>

Exported from <u>Medium</u> on July 15, 2020.