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Why Feature Stores should feature in your data strategy

Design & Delivery of Digital Solutions

Feature Stores enable highly curated data and consistent training data sets for machine learning. This offers full traceability from data source to final outcome.

If you search for the term 'feature stores', what you'll find is, well, not a lot.

That's because feature stores, whilst growing in prominence and importance, are yet to be recognised for the vital role that they play in your data strategy.

They should form the cornerstone of your enterprise wide machine learning ambition. In a world of increasing data governance and with data monetisation in mind, it's important to understand exactly what they are and why they should matter to your organisation.

Decision vaults allow you to justify historical business decisions, no matter when they were made, so they should form an integral part of your organisation's governance model.

What is a feature store?

Uber was one of the first organisations to put the term 'feature store' into context when they described the data management aspect of their machine learning platform, Michelangelo.

Made up of precomputed features, feature stores create highly curated data to feed into machine learning algorithms — so they represent the computed end of the Data Lake.

Why they should feature

There are a number of benefits of using feature stores to create highly curated data sets, from compliance and scalability to the potential to commercialise the data in the future.

Decision fidelity

Feature stores effectively provide a 'decision vault' because they create a centralised hub where you store all the features, data and decisions you've ever made.

In a world of increasing data governance, this is an important benefit, helping to ensure decision fidelity through data lineage, training and post-evaluation replay.

Ability to scale up

As common machine learning archetypes start to evolve from an experimentation phase to more of an industrialisation phase, being able to scale your data management capability is vital.

Feature stores allow your machine learning team to scale up considerably, invest in data curation and collection, whilst creating a solid foundation for managing your training data.

Maximising monetisation potential

This is the dawning of the age of a commercially minded data team — one which needs to be seen as a profit generating centre, rather than a cost centre.

So whilst it may not be a consideration for your organisation now, the ability of feature stores to define and store large amounts of highly curated data over time, represents a potentially lucrative opportunity for both the machine learning team and wider organisation.

Indeed, having an effective data collection strategy now, with a roadmap to monetisation, will help to not only make a business case for investment in your feature store, but will also allow your organisation to grow through adjacency as a net reseller of highly curated, valuable data.

What is there to lose?

Use of feature stores as part of your wider data strategy, could reap a great deal of benefit for your business - both now and in the future.

However, failure to recognise the potential of feature stores could lead to a number of unintended consequences.

Reputational risk

If your business is unable to justify a historic business decision because you don't have the ability, through a feature store, to replay the decision-making process, you run the risk of damaging your reputation amongst customers, shareholders and industry peers alike.

Regulatory risk

Not only this, failure to substantiate how business decisions have been derived—from data source, to feature, to final outcome—could have a significant impact, especially for highly regulated industries or the public sector.

Failure to comply with data protection and governance requirements will not only affect your reputation, but could also lead to costly sanctions from the Information Commissioner's Office.

Potential to lose business

Whilst reputational damage and financial sanctions can lead you to lose business or market share, you also run the risk of making incorrect business decisions without the highly curated data that feature stores provide.

You may even be too conservative in your business decisions because you lack the data necessary to create the training datasets you need to intelligently automate your business processes.

When thinking about your organisation's machine learning ambitions and wider data strategy, it's important to recognise the role that feature stores can and will play - not only in terms of governance, but also in the context of your reputation and future growth potential.

Act now

6point6's Data Platform team has helped a growing number of organisations to address their feature needs.

Working with you, we will provide invaluable insights that will inform everything from machine learning hypothesis generation through to the creation and implementation of scalable data platforms, including feature stores. Not only this, we create API addressable machine learning models that can be rapidly integrated into bespoke digital solutions.

Get in touch

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About 6point6

Integrating digital technology into your business can result in fundamental changes to how you operate and deliver value to your customers. To go digital is to reinvent yourself to the core, opening yourself and your clients to a world of possibilities.

6point6 is a technology consultancy. We bring a wealth of hands-on experience to help financial service providers, media houses and government achieve more with digital. Using cutting edge technology and agile delivery methods, we help you reinvent, transform and secure a brighter digital future.

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