Artificial Intelligence in Practice

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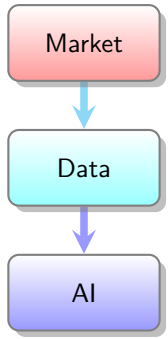
February 25, 2020

Good market understanding (still) trumps technology



In practice

- Do research (e.g. design thinking, exploratory data analyses)
- Define actions

Artificial intelligence and risk: more buzzwords that matter

- Agile: agilemanifesto.org
- TDD: Kent Beck, *Test Driven Development: By Example*
- DevOps: Google's *Site Reliability Engineering*

Source:
`https://commons.wikimedia.org/wiki/File:Codex_Aemilianensis.jpg`

Standard Model Metrics (Almost) Never Matter

- Accuracy [ATPPL16, MVW19]
- ROC-AUC
- Translation into business impact
- Model performance in the wild, or life is not a Kaggle competition, see also [RZK19]

In theory, there is no difference
between theory and practice.
In practice, there is.
Yogi Berra

Deploying AI

Is deploying AI different?

No, since it is still is software

- Manage dependencies, e.g. workshop material, polytope packages
- Library + app, e.g. 12 Factor App

Yes, since it is not standard software

- Python
- Model maintenance

References I

[ATPPL16] Nikolaos Aletras, Dimitrios Tsarapatsanis, Daniel Preoţiuc-Pietro, and Vasileios Lampos, *Predicting judicial decisions of the european court of human rights: A natural language processing perspective*, PeerJ Computer Science **2** (2016), e93.

[MVW19] Masha Medvedeva, Michel Vols, and Martijn Wieling, *Using machine learning to predict decisions of the european court of human rights*, Artificial Intelligence and Law (2019).

[RZK19] Steffen Rendle, Li Zhang, and Yehuda Koren, *On the difficulty of evaluating baselines: A study on recommender systems*, arXiv preprint arXiv:1905.01395 (2019).