# References

#### Introduction to Machine Learning in Production

This is a compilation of resources including URLs and papers appearing in lecture videos.

Overall resources:

Konstantinos, Katsiapis, Karmarkar, A., Altay, A., Zaks, A., Polyzotis, N., ... Li, Z. (2020). Towards ML Engineering: A brief history of TensorFlow Extended (TFX). <a href="http://arxiv.org/abs/2010.02013">http://arxiv.org/abs/2010.02013</a>

Paleyes, A., Urma, R.-G., & Lawrence, N. D. (2020). Challenges in deploying machine learning: A survey of case studies. http://arxiv.org/abs/2011.09926

#### Week 1: Overview of the ML Lifecycle and Deployment

Concept and Data Drift

Monitoring ML Models

A Chat with Andrew on MLOps: From Model-centric to Data-centric Al

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Sculley, D., Holt, G., Golovin, D., Davydov, E., & Phillips, T. (n.d.). Hidden technical debt in machine learning systems. Retrieved April 28, 2021, from Nips.cc

https://papers.nips.cc/paper/2015/file/86df7dcfd896fcaf2674f757a2463eba-Paper.pdf

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https://papers.nips.cc/paper/2015/file/86df7dcfd896fcaf2674f757a2463eba-Paper.pdf

### Week 2: Select and Train Model

Establishing a baseline

**Error** analysis

**Experiment tracking** 

Brundage, M., Avin, S., Wang, J., Belfield, H., Krueger, G., Hadfield, G., ... Anderljung, M. (n.d.). Toward trustworthy AI development: Mechanisms for supporting verifiable claims \* . Retrieved May 7, 2021 <a href="http://arxiv.org/abs/2004.07213v2">http://arxiv.org/abs/2004.07213v2</a>

Nakkiran, P., Kaplun, G., Bansal, Y., Yang, T., Barak, B., & Sutskever, I. (2019). Deep double descent: Where bigger models and more data hurt. Retrieved from <a href="http://arxiv.org/abs/1912.02292">http://arxiv.org/abs/1912.02292</a>

## Week 3: Data Definition and Baseline

Label ambiguity

https://arxiv.org/pdf/1706.06969.pdf

**Data pipelines** 

Data lineage

**MLops** 

Geirhos, R., Janssen, D. H. J., Schutt, H. H., Rauber, J., Bethge, M., & Wichmann, F. A. (n.d.). Comparing deep neural networks against humans: object recognition when the signal gets weaker \* . Retrieved May 7, 2021, from Arxiv.org website: