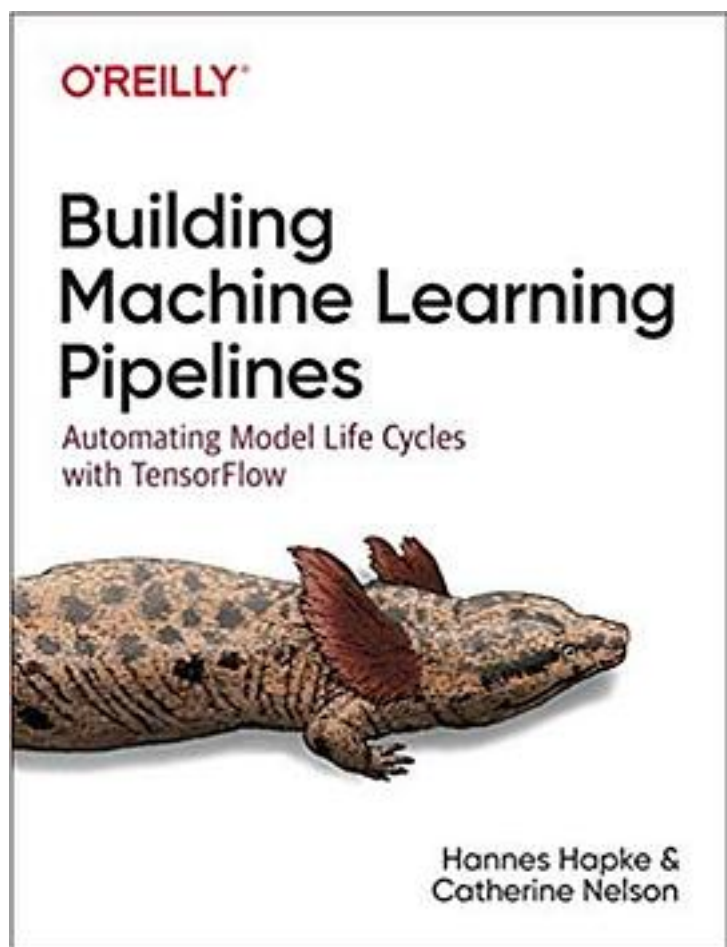


Building Machine Learning Pipelines



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Companies are spending billions on machine learning projects, but it's money wasted if the models can't be deployed effectively. In this practical guide, Hannes Hapke and Catherine Nelson walk you through the steps of automating a machine

learning pipeline using the TensorFlow ecosystem. You'll learn the techniques and tools that will cut deployment time from days to minutes, so that you can focus on developing new models rather than maintaining legacy systems.

Data scientists, machine learning engineers, and DevOps engineers will discover how to go beyond model development to successfully productize their data science projects, while managers will better understand the role they play in helping to accelerate these projects. The book also explores new approaches for integrating data privacy into machine learning pipelines.

Understand the machine learning management lifecycle

Implement data pipelines with Apache Airflow and Kubeflow Pipelines

Work with data using TensorFlow tools like ML Metadata, TensorFlow Data Validation, and TensorFlow Transform

Analyze models with TensorFlow Model Analysis and ship them with the TFX Model Pusher Component after the ModelValidator TFX Component confirmed that the analysis results are an improvement

Deploy models in a variety of environments with TensorFlow Serving, TensorFlow Lite, and TensorFlow.js

Learn methods for adding privacy, including differential privacy with TensorFlow Privacy and federated learning with TensorFlow Federated

Design model feedback loops to increase your data sets and learn when to update your machine learning models

作者介绍:

Hannes Hapke is a VP of Engineering at Caravel, a machine learning company providing novel personalization products for the retail industry. Prior to joining Caravel, Hannes was a Senior Data Science Engineer at Cambia Health Solutions, a health solutions provider for 2.6 million people and a Machine Learning Engineer at Talentpair, Inc. where he developed novel deep learning model for recruiting companies. Hannes co-founded a renewable energy startup which applied deep learning to detect homes would be optimal candidates for solar power. Additionally, Hannes has co-authored a publication about natural language processing and deep learning and presented at various conferences about deep learning and Python.

Catherine Nelson is a Senior Data Scientist for Concur Labs at SAP Concur, where she explores innovative ways to use machine learning to improve the experience of a business traveller. She is particularly interested in privacy-preserving ML and applying deep learning to enterprise data. In her previous career as a geophysicist she studied ancient volcanoes and explored for oil in Greenland. Catherine has a PhD in geophysics from Durham University and a Masters of Earth Sciences from Oxford University.

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