Challenges of Productive ML at LinkedIn
LinkedIn

Productive Machine Learning
AI = Oxygen for LinkedIn Products

People You May Know

Feed

Jobs

Learning
ML Development Process
Complex Experience

Avro

TCPool

TensorFlow

samza

kafka

Avro  ORC  Parquet

oreillyaicon.com

#OREillyAI
Frictionless Experience

Features + Algorithms = Machine Learning Model and AI
Computation Speed

**Members Profile**

- `member_id, name, {skills}`

  \[ \text{members_profile.filter(} \text{"java" in skills)} \]

- `member_id, name, {skills}`

**Java Engineers**

**Page View Event**

- `member_id, url, time`

  \[ \text{page_view_event.count(} \text{"linkedin.com", 6 hours)} \]

- `member_id, url, time`

**Recent Visitors**

**Potential Candidates**

Join by `member_id`
Computation Speed

Deep Learning

Trees

General Linear Mixed Models

- Input Layer
- Hidden Layer
- Output Layer

Observation samples

Prediction

Global Model + Per-User Model + Per-Item Model
Powerful and Stable Infra

Consumed resources