



ACCELERATING MACHINE LEARNING & DEEP LEARNING AT SCALE

WITH INTEL AND APACHE SPARK

ZIYA MA

HEALTHCARE



AUTOMOTIVE



INDUSTRIAL



RETAIL



AI IS TRANSFORMING INDUSTRIES

WORKFLOW
TOOLS/SDK

Intel® Deep Learning SDK
(Training & Deployment)

BIG DATA
ANALYTICS



BigDL

DEEP LEARNING
FRAMEWORK
OPTIMIZATIONS



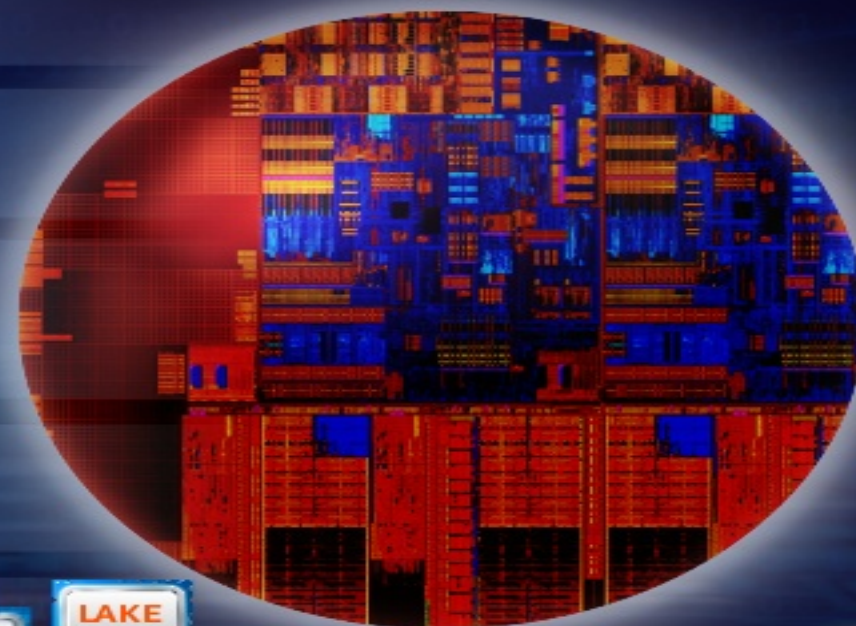
theano Caffe



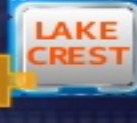
LOW LEVEL
SOFTWARE
PRIMITIVES



Intel® Math Kernel Library
for Deep Neural Networks
(Intel® MKL-DNN)



INTEL®
ARCHITECTURE (IA)



AI ON IA: UNLEASHING THE NEXT WAVE

AI NEEDS

**EASE OF
USE**



**EFFICIENT
SCALABILITY**



**LOWER
TCO**



**HIGH
PERFORMANCE**



BIGDL ANSWERING THE NEEDS



FEATURE PARITY WITH CAFFE* and TORCH*

DRIVES SPARK/HADOOP AS THE UNIFIED
DATA ANALYTICS PLATFORM, GIVING EASY
CUSTOMER AND DEVELOPER EXPERIENCE
AND LOWER TCO

DEEP LEARNING ON BIG DATA PLATFORM,
ENABLING EFFICIENT SCALE-OUT

HIGH PERFORMANCE AT SINGLE-NODE

Github: github.com/intel-analytics/BigDL

*Other names and brands may be claimed as the property of others

CUSTOMER USE CASES FOR BIGDL



FRAUD DETECTION



FINANCIAL SERVICES



DEFECT RECOGNITION



MANUFACTURING

BIGDL IN databricks®

APACHE
Spark
Clusters

DATA
INGEST

FEATURE
EXTRACTION

MODEL
TRAINING &
PREDICTION

PRODUCT-
IONIZE

AUTOMATED
MANAGEMENT

JUST-IN-TIME
DATA PLATFORM

INTERACTIVE
EXPLORATION

BigDL

JOBS &
WORKFLOWS



JOIN US AND CONTRIBUTE TO BIGDL

Github: github.com/intel-analytics/BigDL **Additional info:** software.intel.com/AI

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