Introduction
To Acumos AI

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Agenda

• Introducing Acumos AI
• Why Acumos AI
• What is the Architecture
• Quick Overview
• Platform and model seed code
• Project Infrastructure
• Project organization
Introducing Acumos AI

A Collaborative Framework under Linux Foundation

Form a Distributed AI Marketplace and Community

Leverage Interoperable Microservices

Simplify the Training, Evaluation, and Deployment
Why Acumos AI

• Grow awareness of AI/ML/DL as software tools
• Promote the use of AI across all parts of the company
• Increase communications and reduce redundancy
• Unify around a common catalog
  • Internal
  • External Partners
• Simplify the use models and predictors by IT and OPS.
• Provide an educational and a graduated experience for users
What is the Architecture

- Portable Onboarding Source Library
- Model Import and Microservice Creation
- Microservice Repository Manager
- Design Studio
- Federated Catalog Sharing
- Microservice Packager
- Marketplace Portal
- Cloud Deployment Tooling
- Portable Data Broker
- Training Client*
- Training Cache*
- License Manager*

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Private Models | Shared Models
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Public Marketplace & Catalog

Community Marketplace & Catalog

Company Data Powered Apps

ML Platform

CI/CD Platform
- Jenkins, CloudDeploy, etc.

Runtime Platforms
- Docker, ONAP, Openstack, K8 etc.

Execution/Training Infrastructure
- AIC, AWS, Azure, Google.ai, etc.

Data Infrastructure
- Hive, etc.

Policies

Private Data | Shared Data
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Quick Overview

Open Source

SciKit
Tensor Flow
R
H2O
Python
Java
Docker-CE
MariaDB
Hippo CMS
Maven/Nexus
Sonar/ FOSSology
Robot Framework
Git/Gerrit/Jenkins/Robot
ONAP/OpenStack
Model collaboration through Acumos

The goal
- A vibrant ecosystem of collaboratively developed AI solutions

The method:
- establish ways of working for the ecosystem, directly supporting collaborative relationships between modelers and model users
- processes, best practices, supporting infrastructure
- develop a roadmap of features for the Acumos platform
  - e.g. model training, training data source creation and curation, model versioning, processes for iterative collaboration on models and solutions

https://wiki.acumos.org/display/AC/Developer+Wiki
Seed code

• How to learn about it
  • docs.acumos.org, wiki.acumos.org
• How to get it
  • gerrit.acumos.org
• How to deploy it
  • One Click Deploy User Guide
• How to use it
  • User Guides at docs.acumos.org
• How to enhance it
  • Developer Gerrit/CI/CD Resources, Developer Wiki
Acumos project infrastructure

• Collaboration and communication tools
  • Jira, Wiki, git and Gerrit, mail lists, Slack, IRC

• Build, test, and repository tools
  • Jenkins, Nexus repositories

• Model collaboration tools
  • On-Boarding, Catalog and Sharing, Publishing, Java Client, Python Client, R Client, Design Studio, Generic Model Model Runner

• Community federation tools and much more

https://wiki.acumos.org/display/INFRA
Acumos project organization

• Acumos in the LF Deep Learning Umbrella project
• Acumos Board and Board committees
• Technical steering committee
  • Acumos project/community goals, policies, practices, processes
• Acumos component and model projects
  • Working proposal: Acumos Architecture Mapping to Repos Jira etc
  • Promote teams with comprehensive and cohesive technical focus
• Modeler and model user community
  • enable growth of the federated model marketplace and communities of modelers and model users