HKUBE

http://hkube.io

Overview :

Hkube is a cloud-native open source framework to run distributed pipeline of algorithms built on Kubernetes. Hkube allows running pipelines of algorithms on kubernetes cluster optimally utilizing the available resources, based on user priorities and AI heuristics.

Features:

- **Distributed pipeline of algorithms :** Hkube receives input DAG graph and automatically parallelized your algorithms(nodes) over the cluster. you can keep your code simple (even single threaded) and let Hkube worry about the complications of distributed processing.
- **Language Agnostic :** Hkube is a container based framework and designed to facilitate the use of any language for your algorithm
- **Optimize Hardware utilization:** Hkube Automatically places containers based on their resource requirements and other constraints, while not sacrificing availability. Mix critical and best-effort workloads in order to drive up utilization and save even more resources. Hkube has metrics and AI engines that helps learn about your algorithm (like run-time, cpu usage, priority ..) which makes execution and clustering efficiency.
- **Algorithm monitoring :** Hkube lets you quickly and easily understand complex problems over the cluster by CNCF technologies (such as Prometheus, Jaeger and more) for monitoring the cluster. Hkube exposes algorithm logs through stdout and integrates them with Hkube logs to get the whole picture.

BREAKTHROUGH:

- Hkube - is the first r open source project
- Hkube is the first cloud native framework that built by r
- Hkube has CI and CD which checks for vulnerabilities, testing code coverage, and rolling update deployment
- Hkube was presented to Google VP of engineering at google cloud
- Hkube chosen to be the major frameworks for running algorithms in am

TECHNOLOGIES:

- Microservices pattern
- Container based using docker and kubernetes
- Variety of open source monitoring tools such as elk prometheus and jaeger
- Hkube using redis and etcd in order to communicate agnostically between microservices with in the cluster