
# Software and Computer Systems

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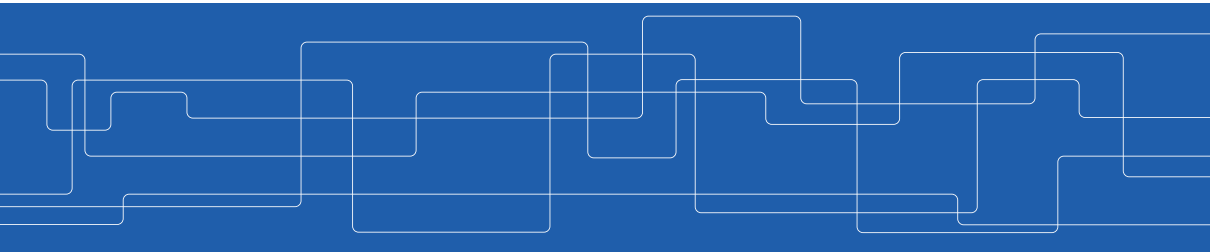

# Software and Computer Systems (SCS)

# SCS Research Areas

Software Engineering

Intelligent Software and Services
Analysis and Development Methods

Model-based computing systems

Distributed and parallel systems

Data science and applied AI

Computer engineering and
computer systems

# Some Research Projects at SCS (1/3)

- ExtremeEarth (H2020)
  - From Copernicus big data to extreme earth analytics
  - http://earthanalytics.eu

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- HOPS (SSF, H2020, SeRC, ...)
  - Deep Learning, streaming, multi-tenancy (all in a single secure platform)
  - https://www.hops.io

# Some Research Projects at SCS (2/3)

- Streamline (H2020)
  - Unified batch and stream processing
  - https://h2020-streamline-project.eu

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STREAMLINE.

- CDA (SSF)
  - Continuous deep analytics
  - Continuous real-time decisions

# Some Research Projects at SCS (3/3)

- RIAS (H2020)
  - Real-time analytics for Internet of Sports
  - https://rais-itn.eu

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- Gecode
  - Generic constraint development environment
  - https://www.gecode.org

# Collaboration with Industry








# Some Courses Given at SCS

- Machine Learning
- Data Mining (basic and advanced courses)
- Distributed Systems (basic and advanced courses)
- Data-Intensive Computing Platforms
- Scalable Machine Learning and Deep Learning
- Programming for Data Science
- Constraint Programming


# Hopsworks


# Collaborative Data Science Platform

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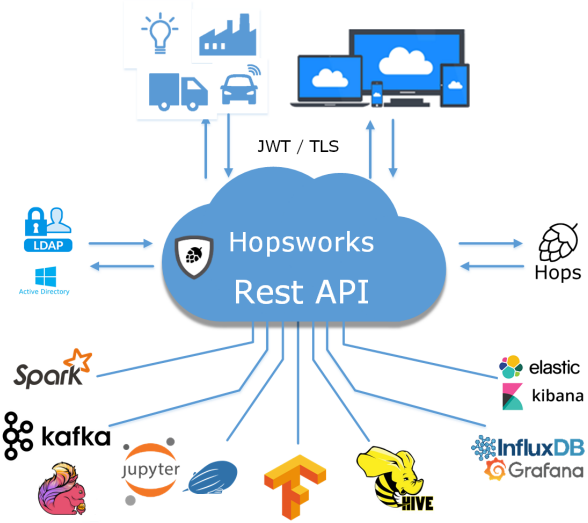
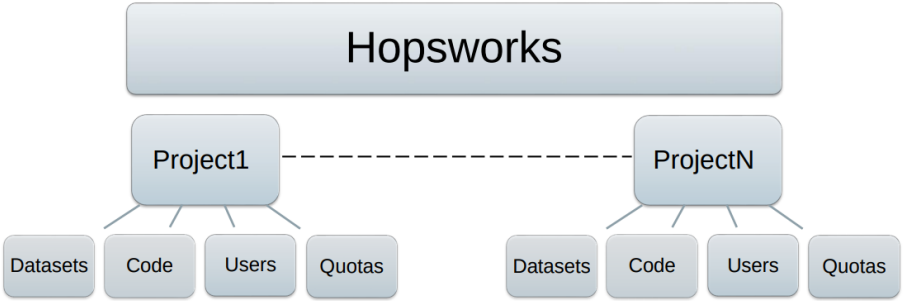
- Collaborative development tools
- Management and reproducibility

# Hopsworks

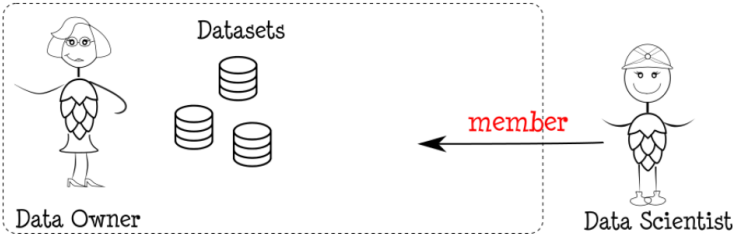

JWT / TLS
LDAP
Active Directory
Hopsworks
Rest API
Hops
Spark
kafka
jupyter
elastic
kibana
InfluxDB
Grafana
HIVE

# Projects in HOPS (1/2)

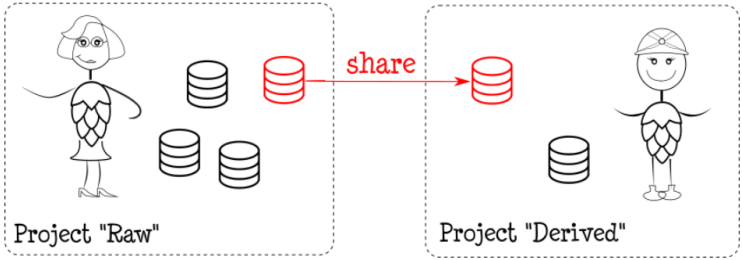
# Projects in HOPS (2/2)



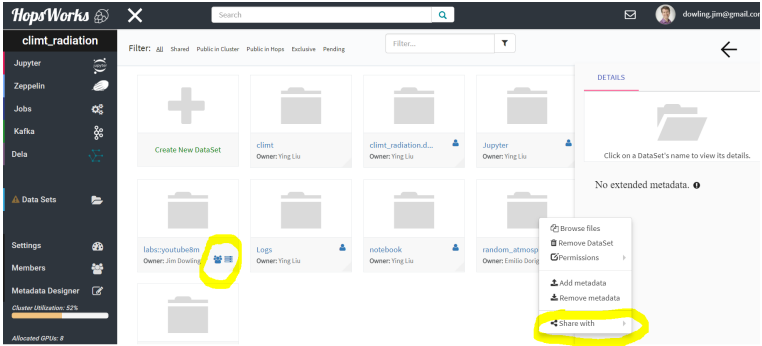
# Manage Projects like GitHub



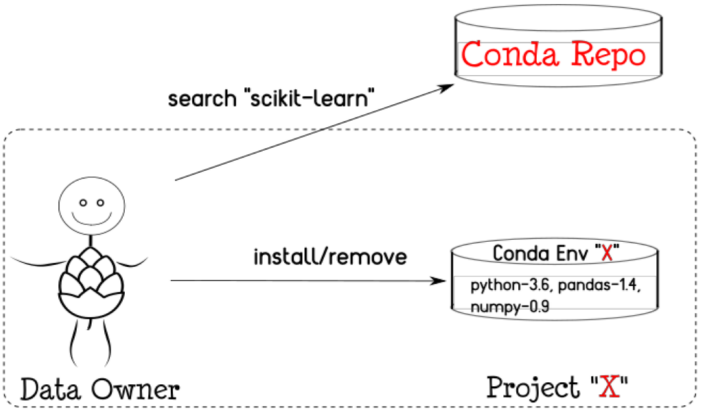
# Share like in Dropbox (1/2)



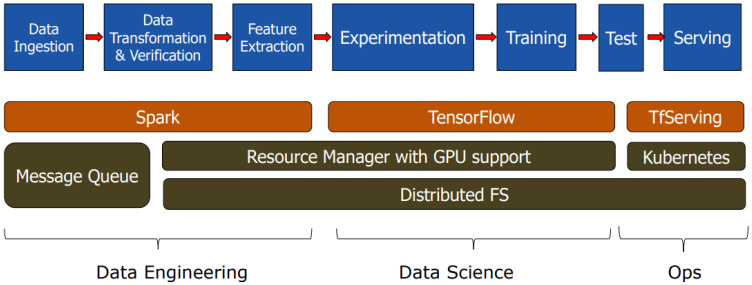
# Share like in Dropbox (2/2)



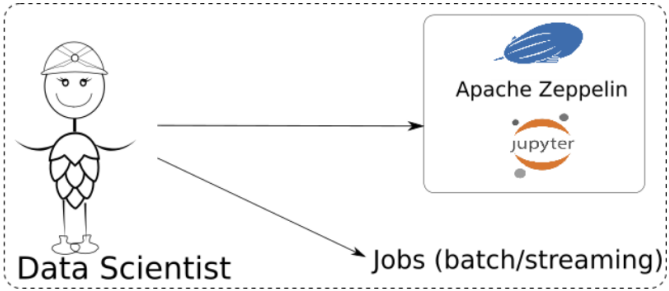
# Custom Python Environments with Conda



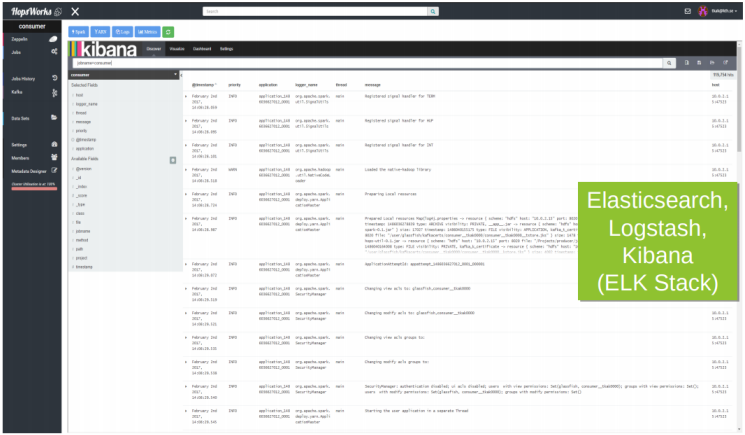
# HOPS Machine Learning Pipeline



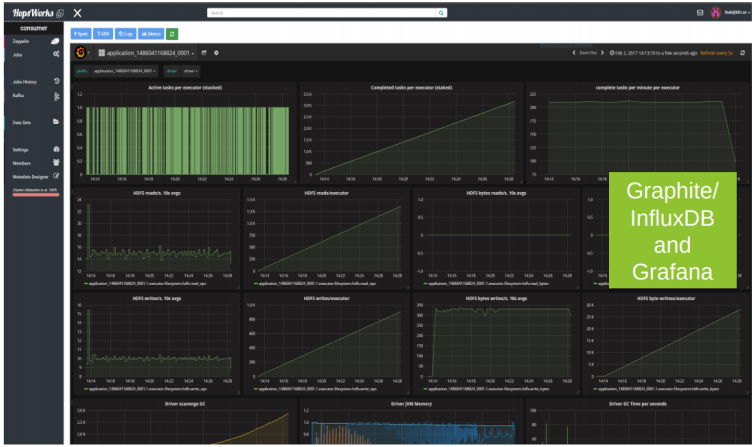
# Workflow/Jobs and Notebook Support



# Realtime Logs



# Resource Monitoring and Alerting




# Thanks