Make any company an AI company!

Greg Fousas

Customer Data Scientist

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Who am I?

https://www.linkedin.com/in/greg-fousas-04252135/

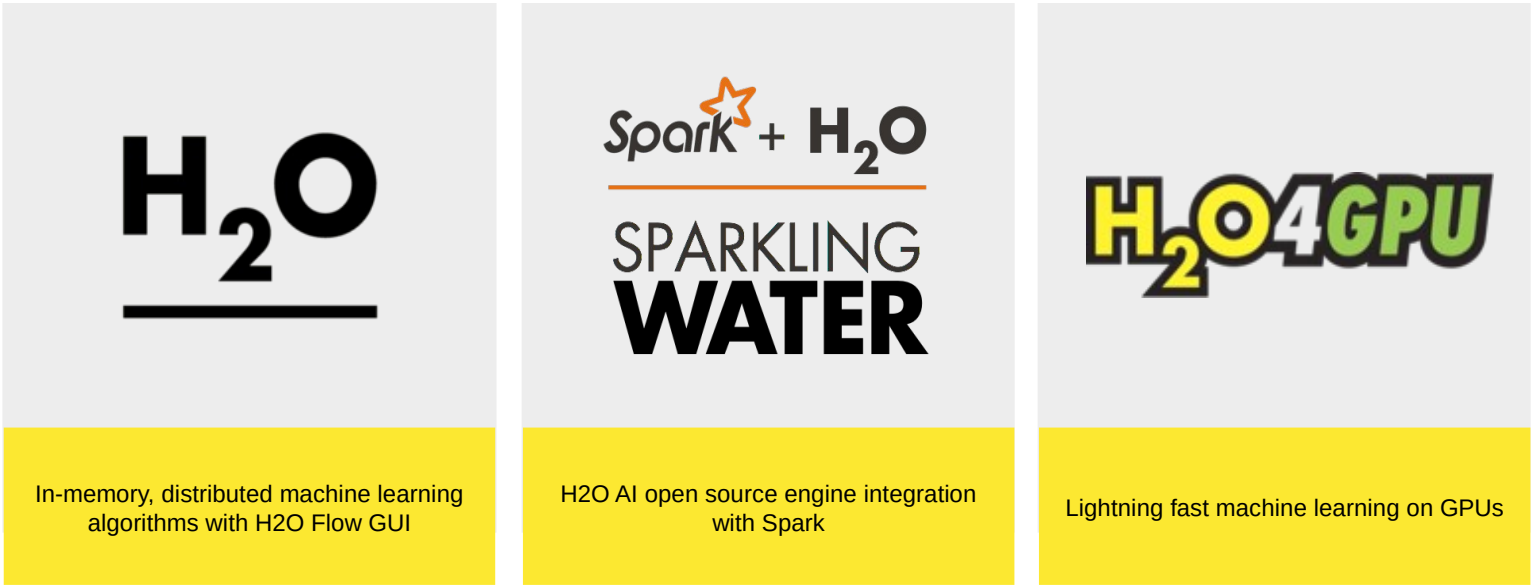
H2O.ai Overview

Company	Founded in Silicon Valley in 2012 Funded: $75M Investors: Wells Fargo, NVIDIA, Nexus Ventures, Paxion Ventures
Products	• H2O Open Source Machine Learning (18,000 organizations) • H2O Driverless AI – Automatic Machine Learning
Team	200 AI experts (Expert data scientists, Kaggle Grandmasters, Distributed Computing, Visualization)
Global	Mountain View, NYC, London, Prague, India

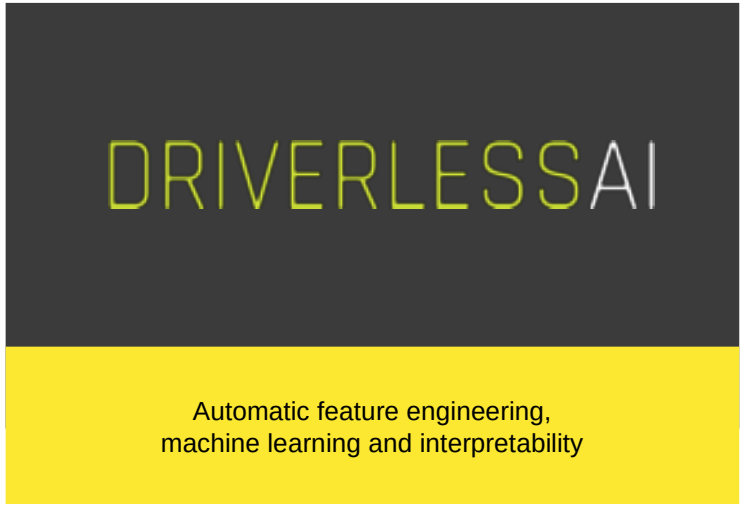



H2O.ai Product Suite

Open Source



- 100% open source – Apache V2 licensed
- Built for data scientists – interface using R, Python on H2O Flow (interactive notebook interface)
- Enterprise support subscriptions



- Enterprise software
- Built for domain users, analysts and data scientists – GUI-based interface for end-to-end data science
- Fully automated machine learning from ingest to deployment
- User licenses on a per seat basis (annual subscription)

H2O Open Source AI Platform

Open Source

100% open source

Big Data Ecosystem

hadoop

APACHE Spark

Spark + H_2O

SPARKLING WATER

Flexible Interface

R

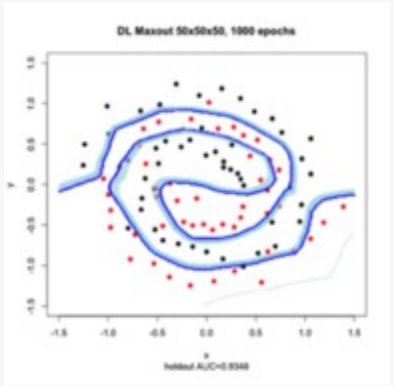
Scala

python

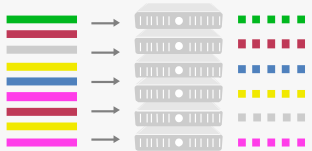
Java

H_2O Flow

Smart and Fast Algorithms



Scalability and Performance



- Distributed in-memory computing platform
- Distributed algorithms
- Fine-grain MapReduce

Rapid Model Deployment

- Highly portable models deployed in Java (POJO)
  and Model Object Optimized (MOJO)
- Automated and streamlined scoring service
  deployment with
  Rest API

REST API

GPU Enablement

GPU

H_2O4GPU

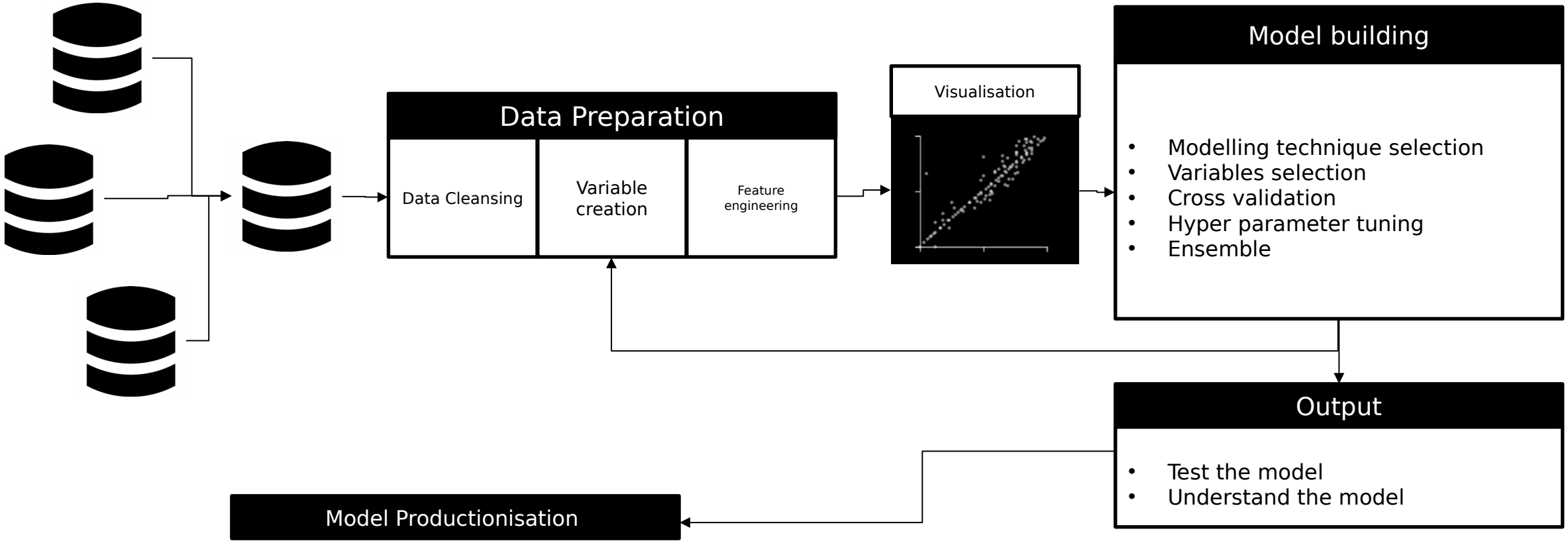
Cloud Integration

amazon web services

Google

Azure

A typical predictive model building process



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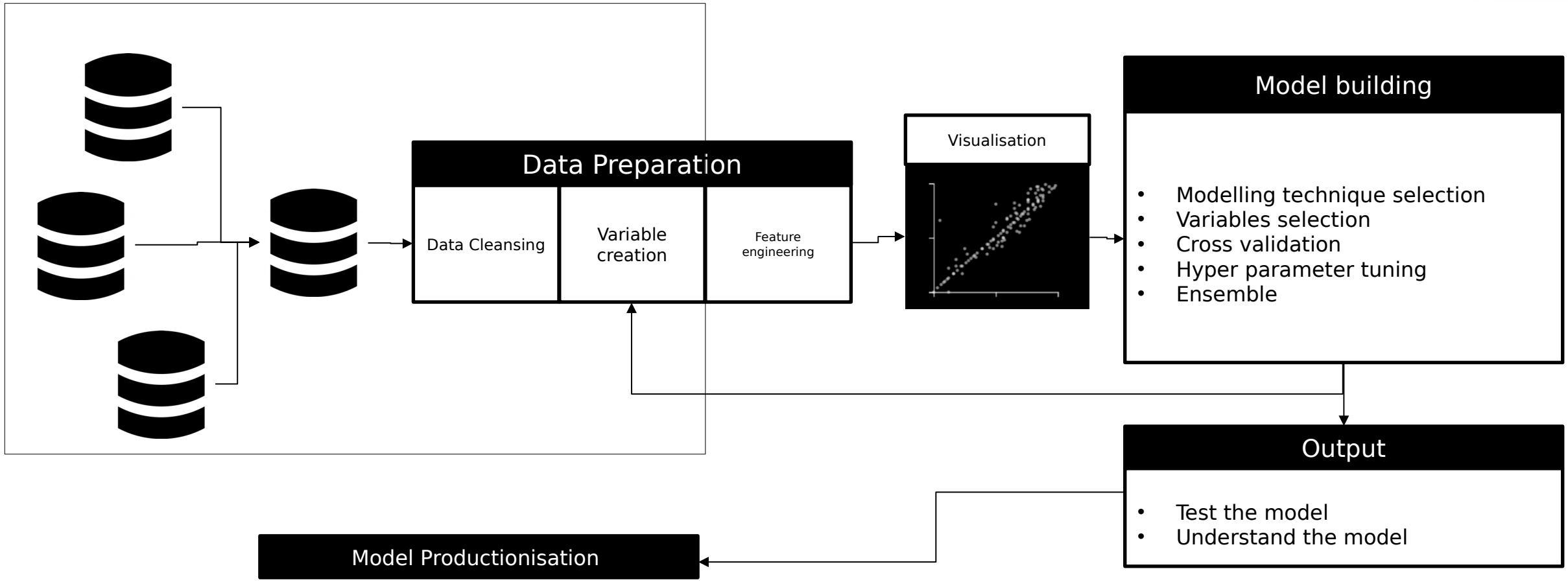
H2O.ai

How?

A typical predictive model building process



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- **Data preparation**
  - datatable
    - R
      - https://github.com/Rdatatable/data.table, Cheat sheet
    - Python
      - https://github.com/h2oai/datatable
  - Benchmark

Matt Dowle ›

About Matt

Matt is the main author of the data.table package in R. He has worked for some of the world's largest financial organizations: Lehman Brothers, Salomon Brothers, Citigroup, Concordia Advisors and Winton Capital. He is particularly pleased that data.table is also used outside Finance, for example Genomics where large and ordered datasets are also researched.

Matt has been programming in S/R for 15 years, knows C pretty well and holds a first class BSc in Applied Maths and Computing from Warwick University, U.K.

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DEMO

https://www.kaggle.com/kernels/scriptcontent/13259895/download

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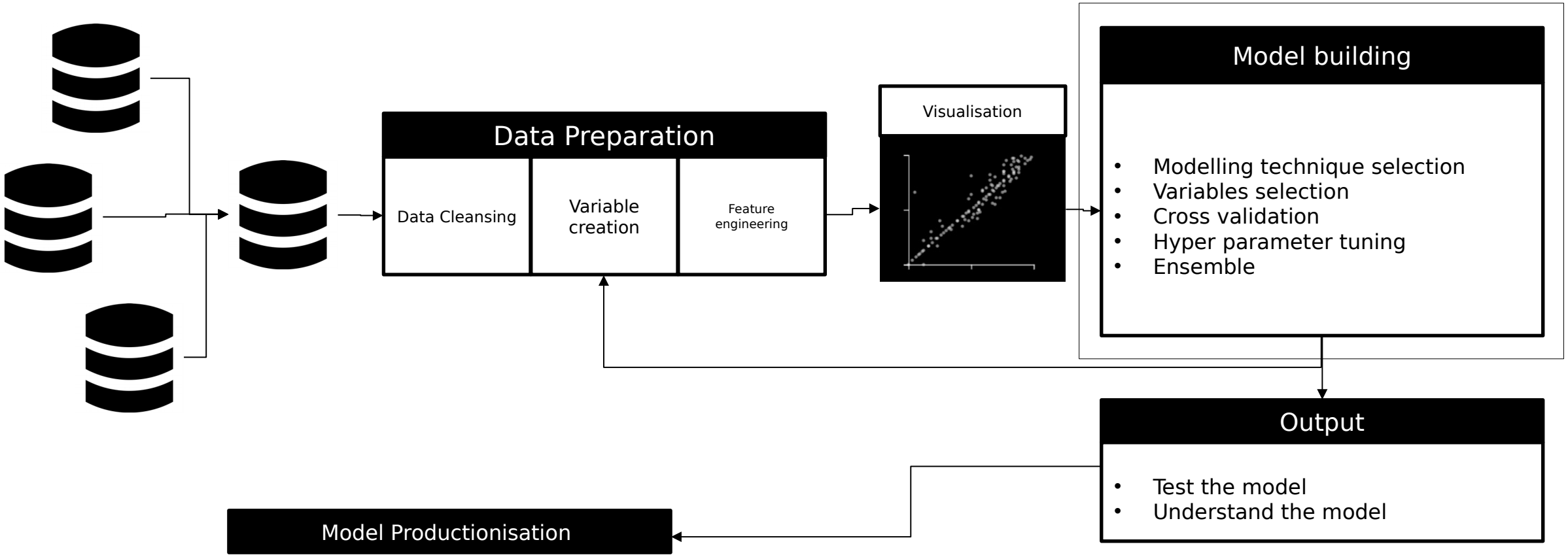

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  - Automl (documentation:http://docs.h2o.ai/h2o/latest-stable/h2o-docs/automl.html)
  - R, Python, Flow

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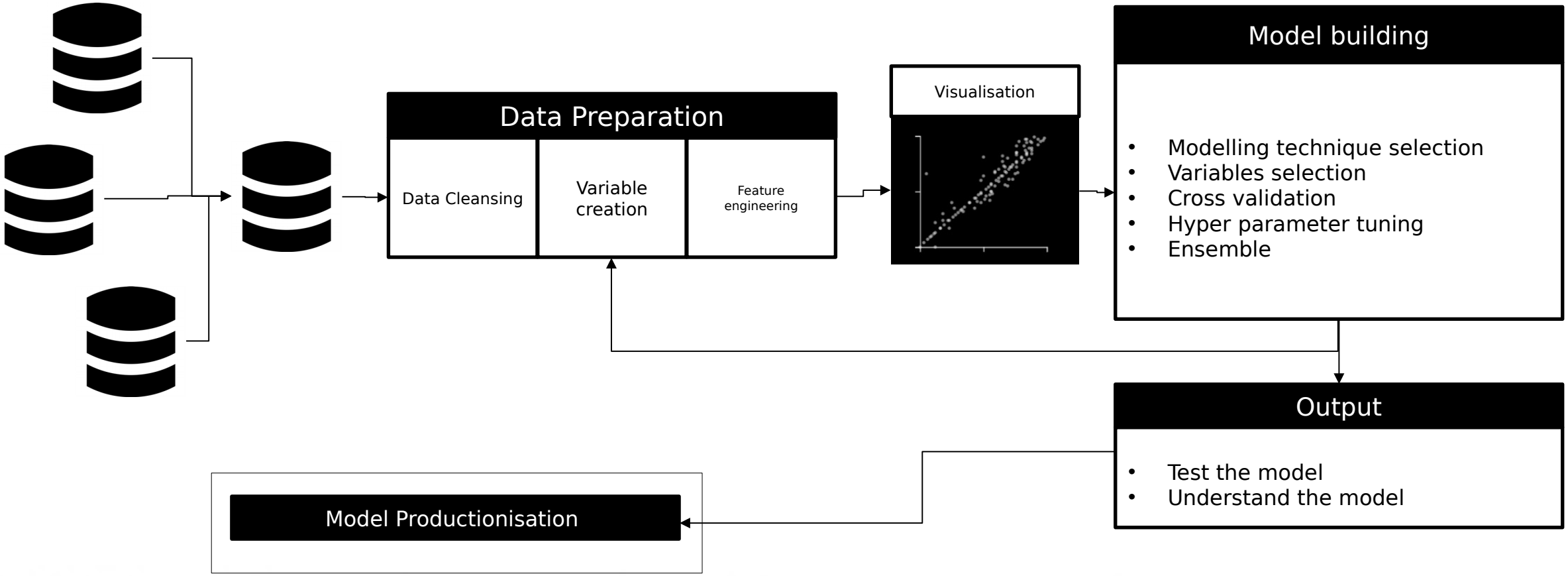

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  - R, Python, Flow, Sparkling Water

- **Model Deployment - Productionisation**
  - R ↔ Python ↔ Sparkling Water
  - Other (http://docs.h2o.ai/h2o/latest-stable/h2o-docs/productionizing.html):

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DEMO

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- **Resourses**
  - Training environment: Aquarium - http://aquarium.h2o.ai
  - Documentation: http://docs.h2o.ai/h2o/latest-stable/h2o-docs/welcome.html
  - Tutorials:
    - http://docs.h2o.ai/h2o-tutorials/latest-stable/index.html
    - https://github.com/h2oai/h2o-tutorials
  - Videos: https://www.youtube.com/user/0xdata/videos


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Thank You