DATAFRAME VS DATASET

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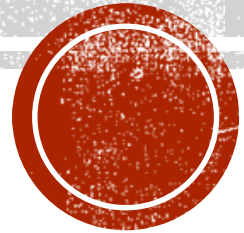

WHAT IS DATAFRAME AND DATASET

- DataFrame is
  - Immutable Table
  - Collection of Generic Row Objects
  - Not Type Safe
  - Introduced to simplify processing on RDD
- Dataset is
  - Collection of strongly typed objects

UNDERSTAND TYPE SAFETY

Type Of Error	SQL	DataFrame	Dataset
Syntax Error	Runtime	Compile Time	Compile time
Analysis Error	Runtime	Runtime	Compile Time

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- You need SQL + Functional Programming Constructs like map(), mapPartition(), aggregate, reduce etc.
- You need lambda functions
- Want Catalyst Optimization, and Tungsten's efficient code generation
- Want more efficient memory usage using Encoders

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- You use Python or R
- Don’t need strong type safety and most of operations will be defined using SQL
- No need for lambda expressions