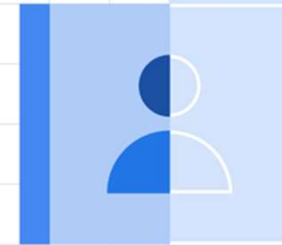
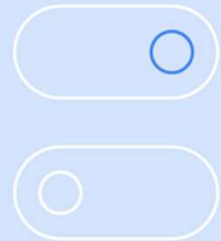


# The Data Science Hierarchy of Needs

Updated 10.22.19



## THE DATA SCIENCE HIERARCHY OF NEEDS

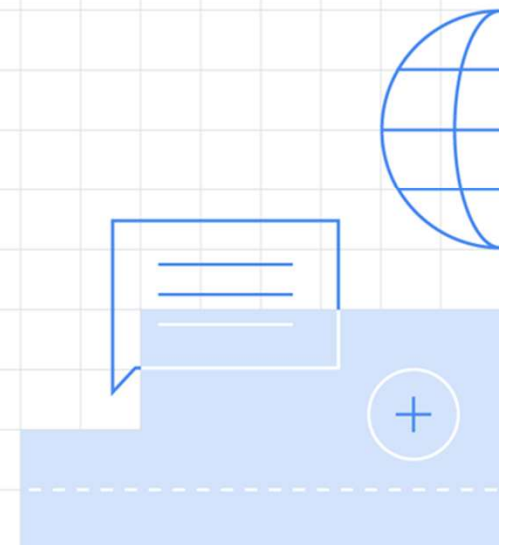
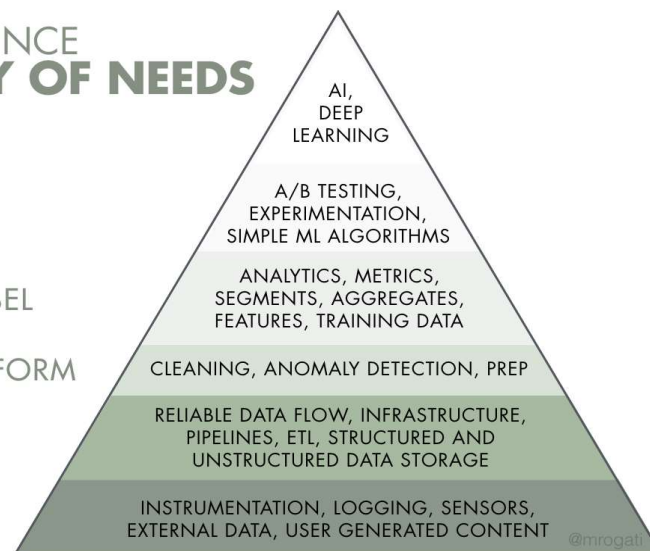
LEARN/OPTIMIZE

AGGREGATE/LABEL

EXPLORE/TRANSFORM

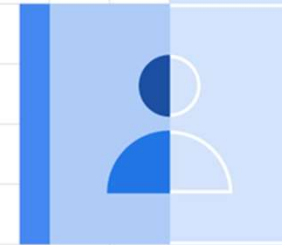
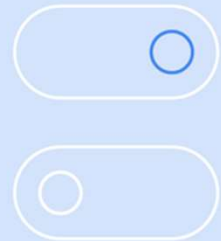
MOVE/STORE

COLLECT

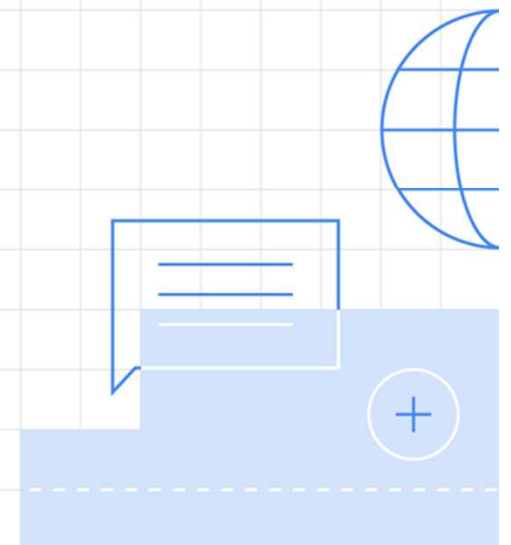
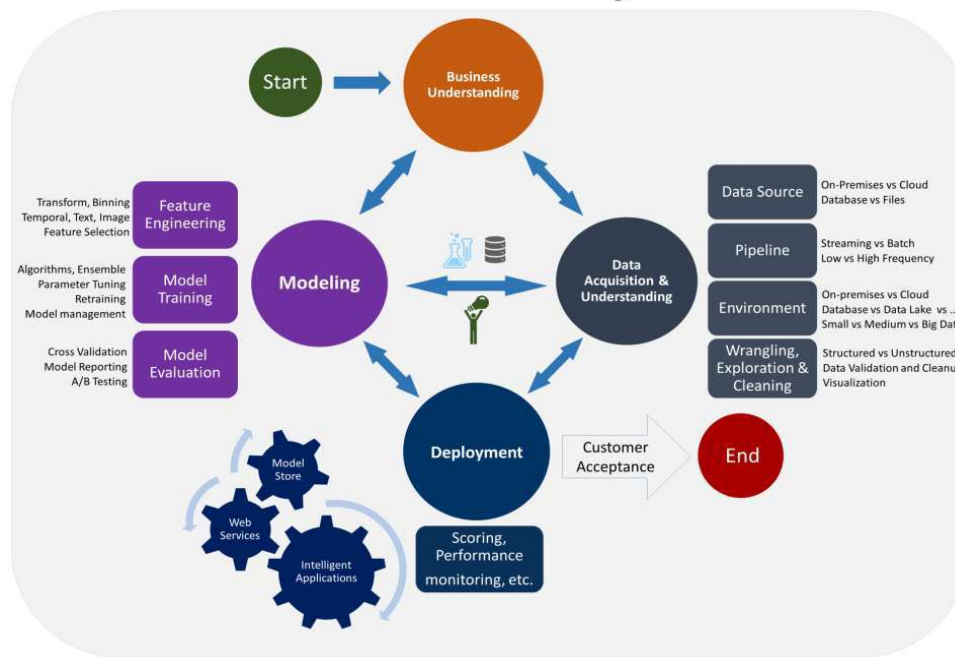


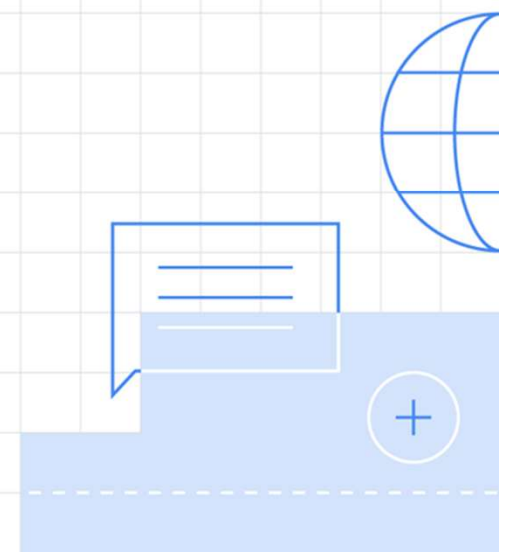
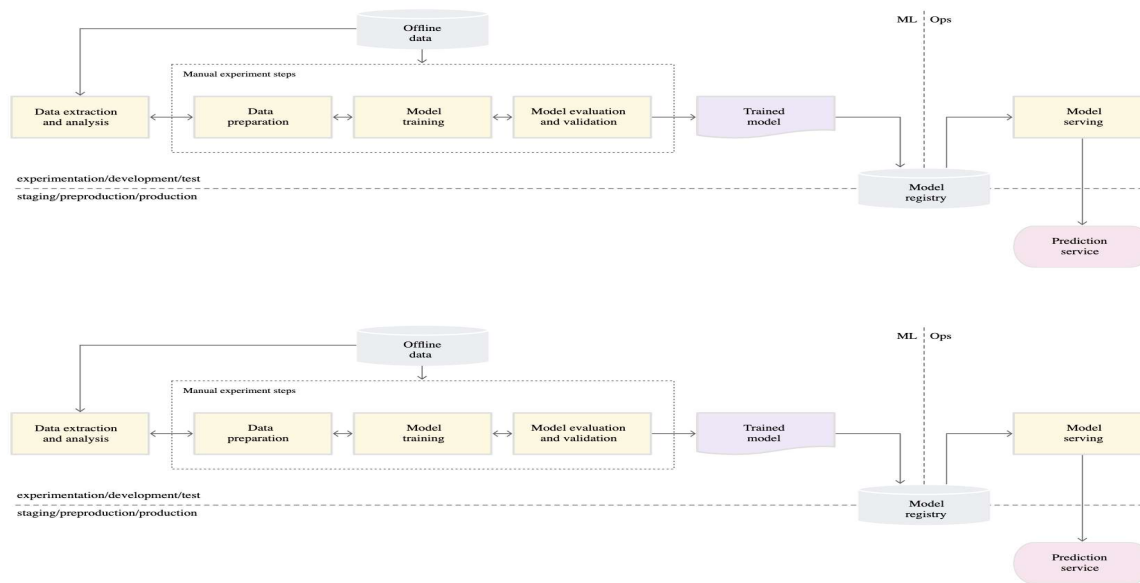
# Data Science Lifecycle

Updated 10.22.19



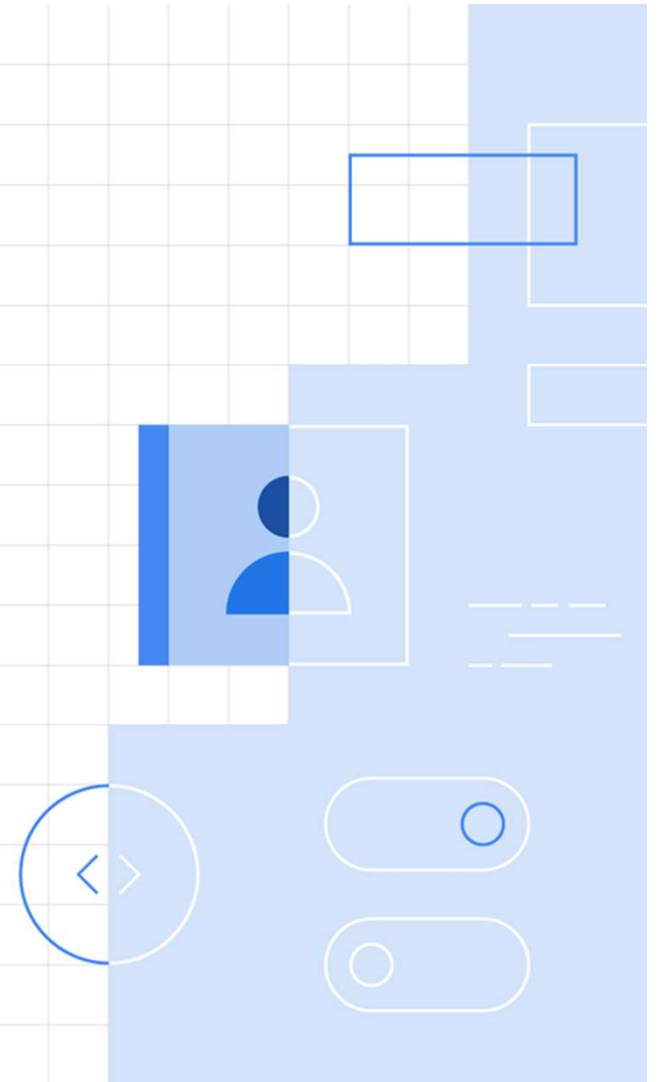
## Data Science Lifecycle



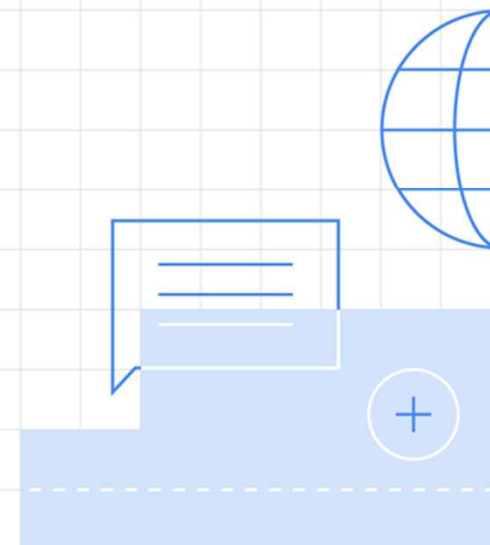
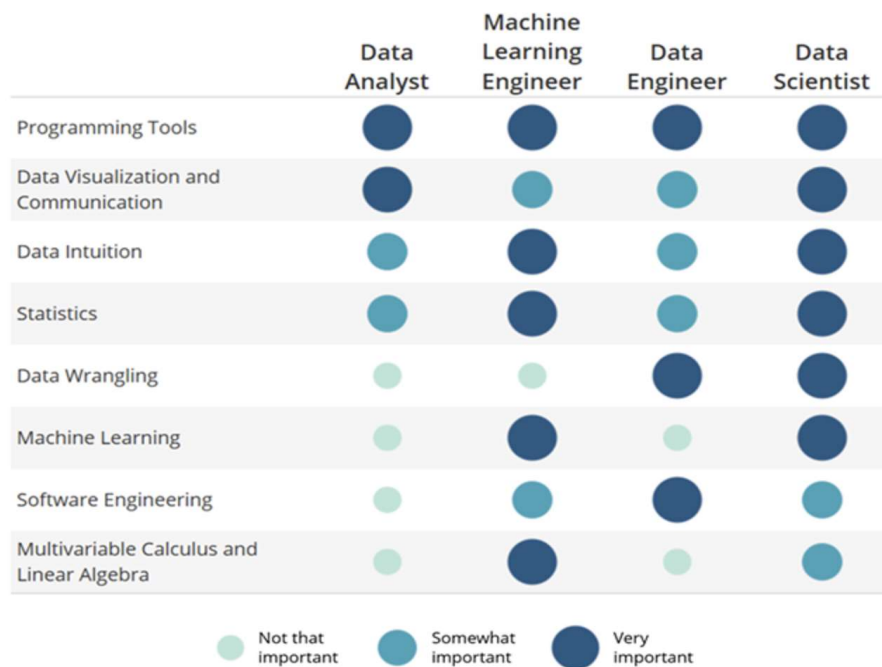


# Data Science Roles and Tools

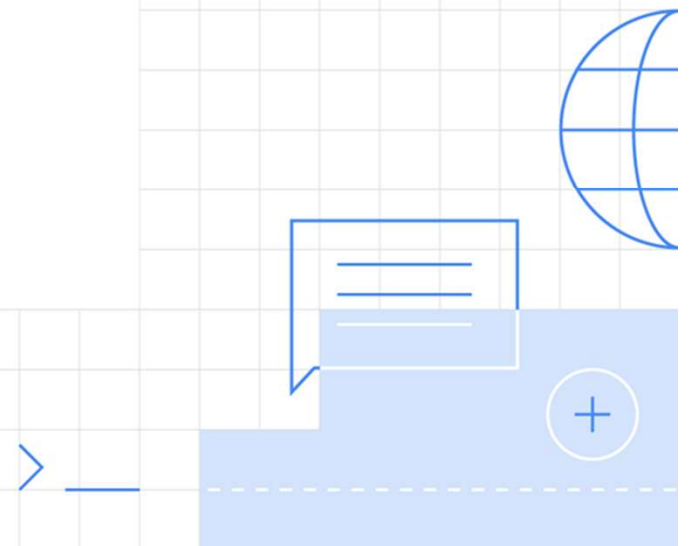
Updated 10.22.19



## Developer Student Clubs



## Data Science Tools and Roles Infographic



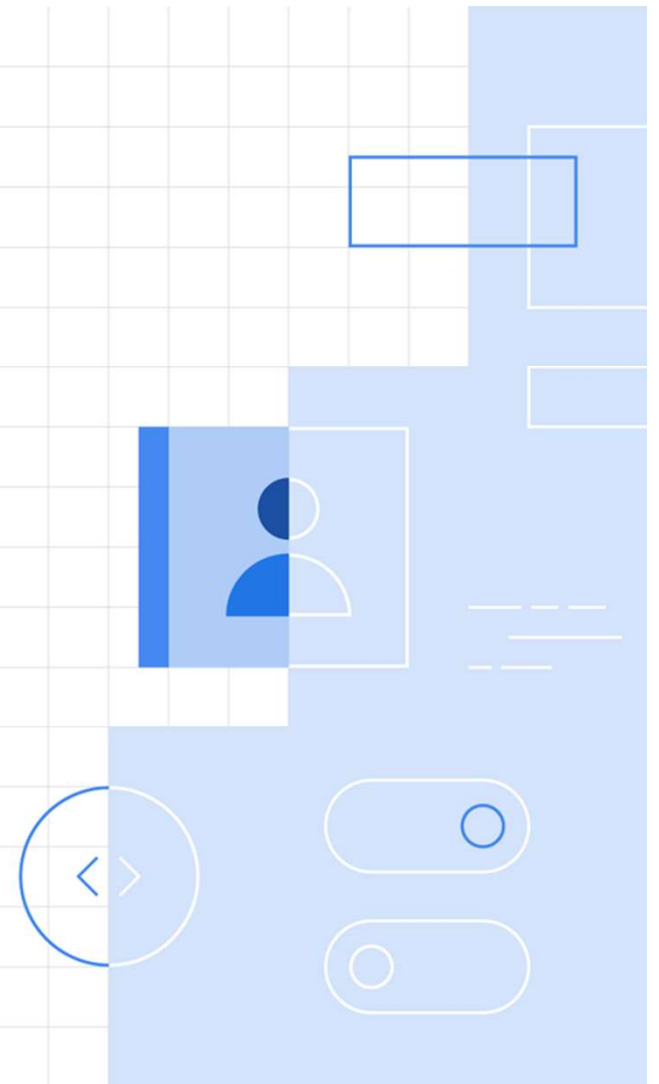




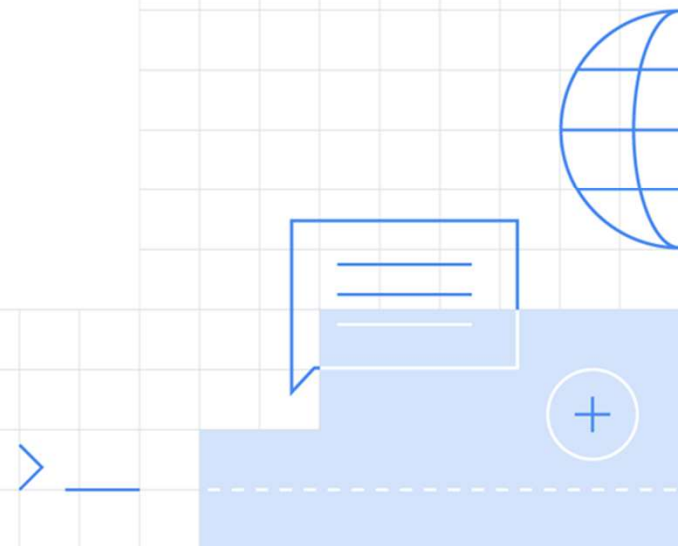
# Machine Learning In Production

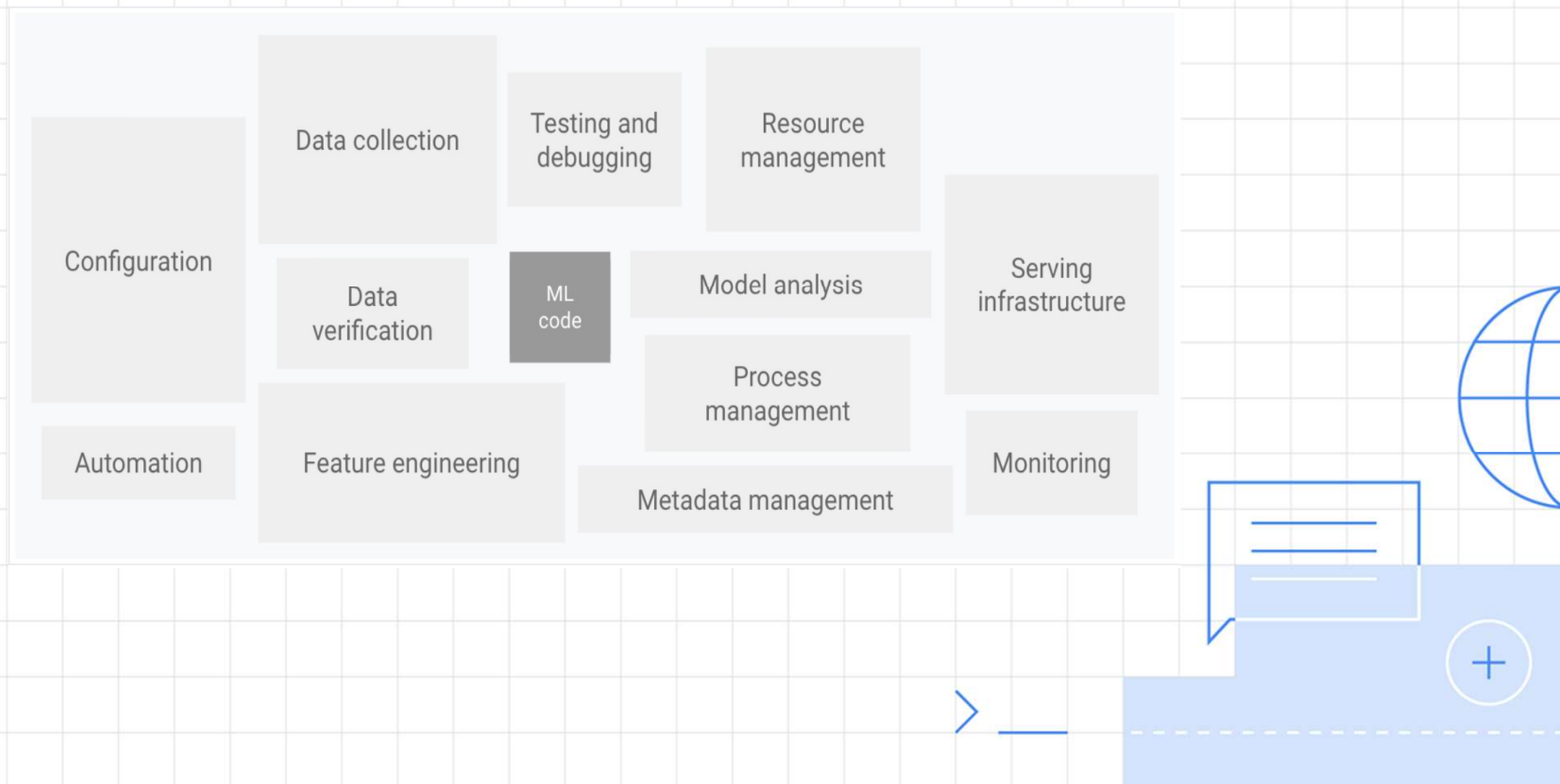
Updated 10.22.19

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According to report, 2020 State of Enterprise Machine Learning, only **22 percent** of companies that use machine learning have successfully deployed an ML model into production.



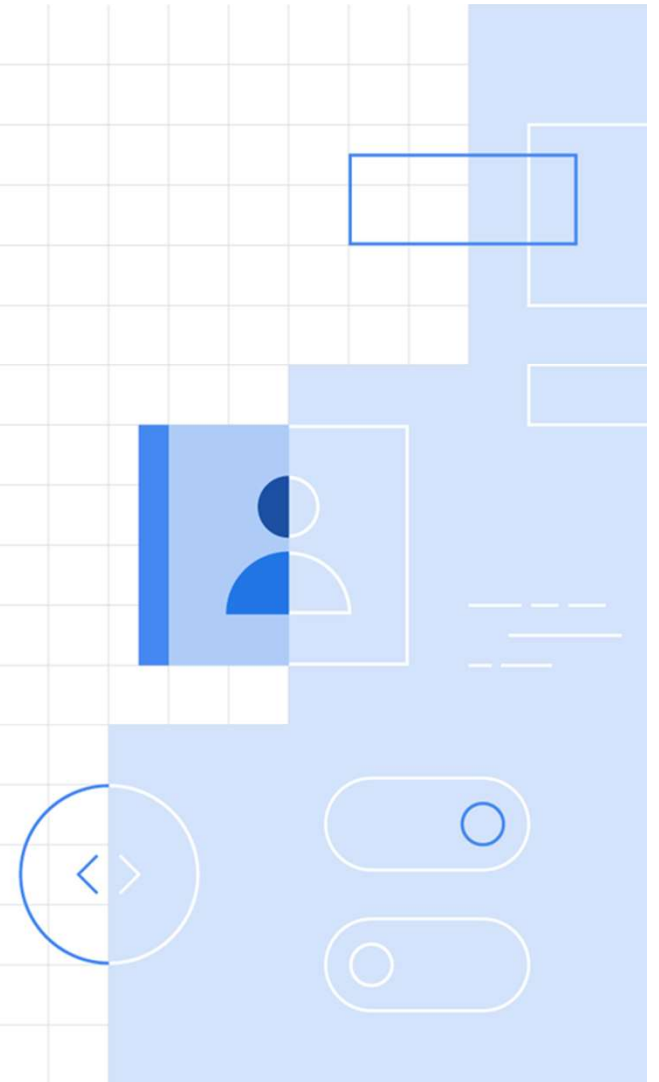




# Business Considerations for Machine Learning

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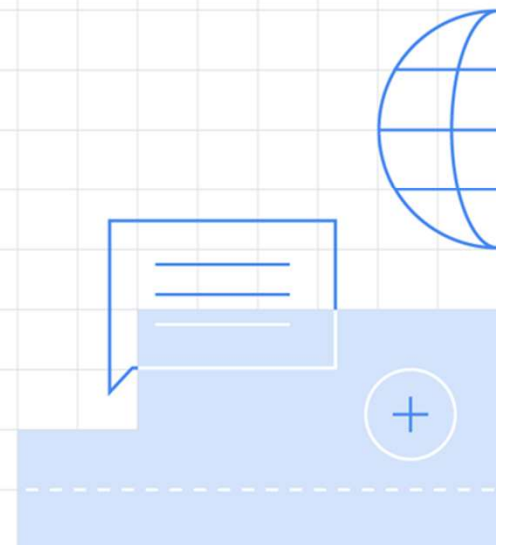
Performance

Time

Cost

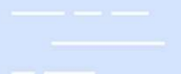
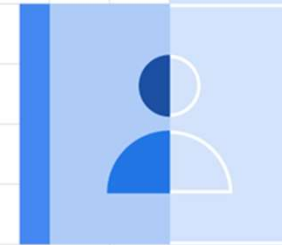
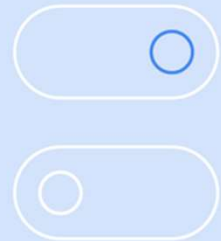
**Scenario 1:** Model with 99% accuracy and inference time of ten seconds

**Scenario 2:** Model with 80% accuracy and inference time of one second



# Business Impact of Evaluation Metrics

Updated 10.22.19



## Classification Metrics

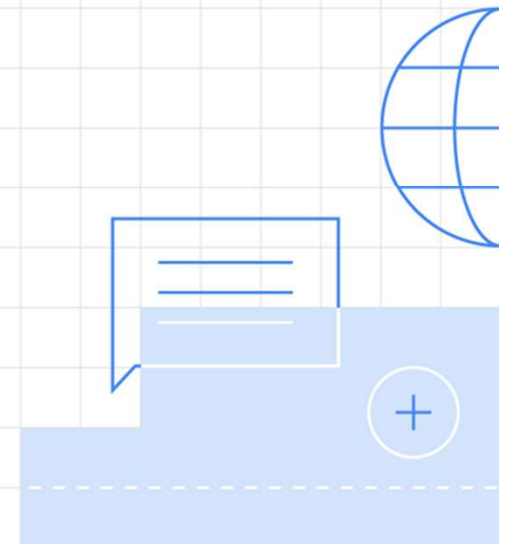
Accuracy

Recall

Precision

**Use Case 1:** Should the tourist be quarantined?

**Use Case 2:** Is the employee going to resign?





Thank you!

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