



| PORTO



Google Cloud



# Creative Lab with BA Glass

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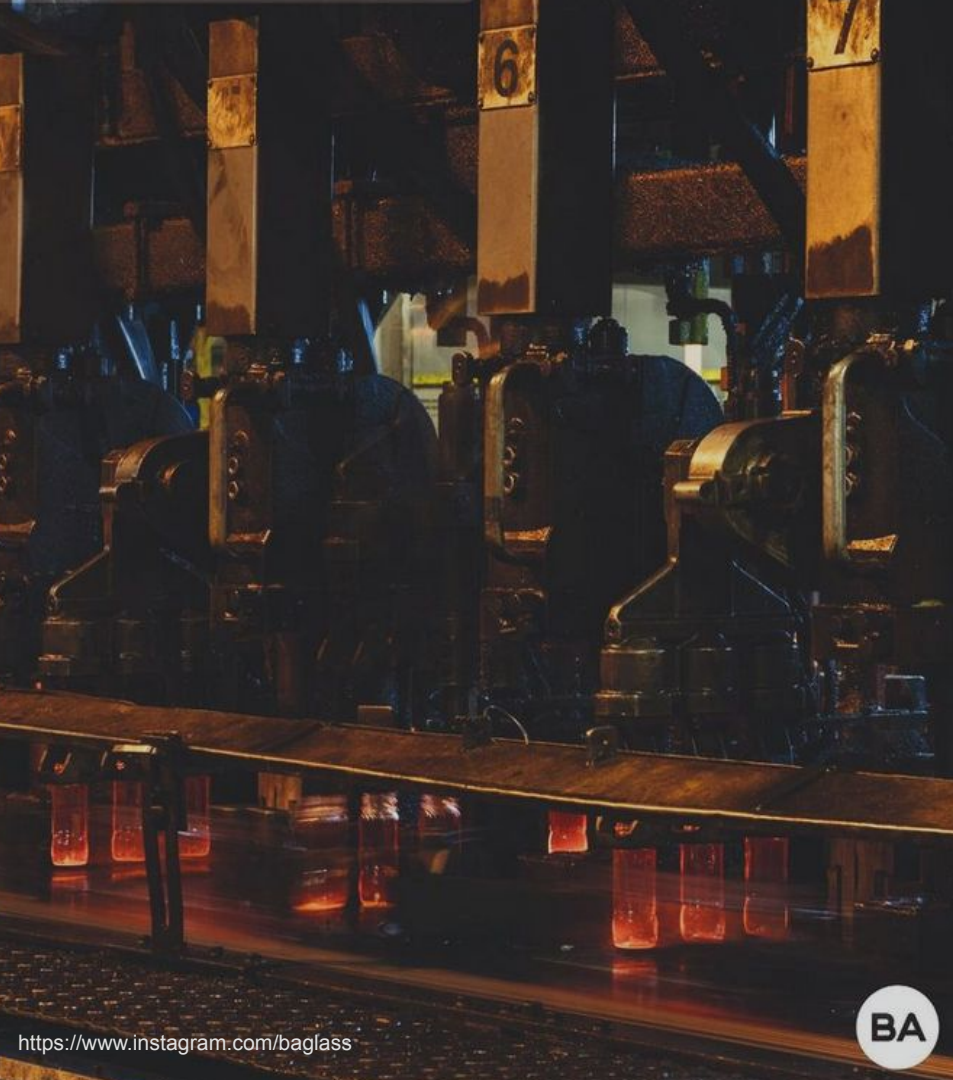
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# Framework of the lab

Use software available on Google Cloud Services to manipulate a set of data supplied by BA Glass to answer specific questions regarding that data.



# Objective of our work

From a dataset of  
adjustments to production  
parameters



**Determine the best set  
of values to maximize  
production throughput.**

Why is this important for BA Glass?

- Improve productivity
- Guarantee replicability
- Smooth succession







What was it important for us?

- Learn about Google Cloud
- Contact with real world problems
- Learn to adjust and work on a tight schedule

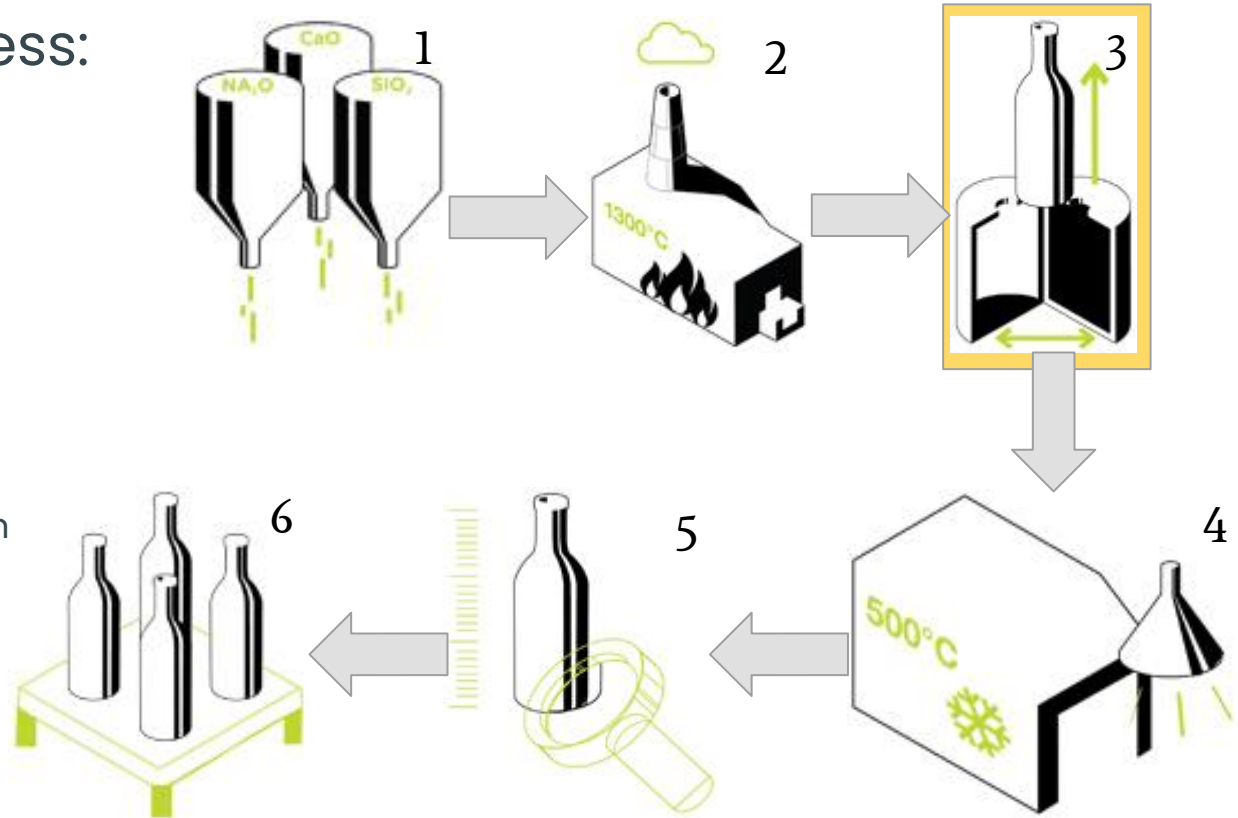
# BA GLASS

- Leading company in the glass packaging industry
- Manufacturing facilities across the world



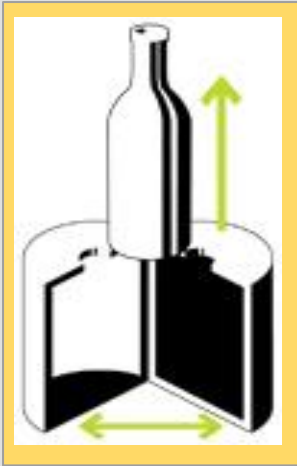
# Analysing the process: Stages

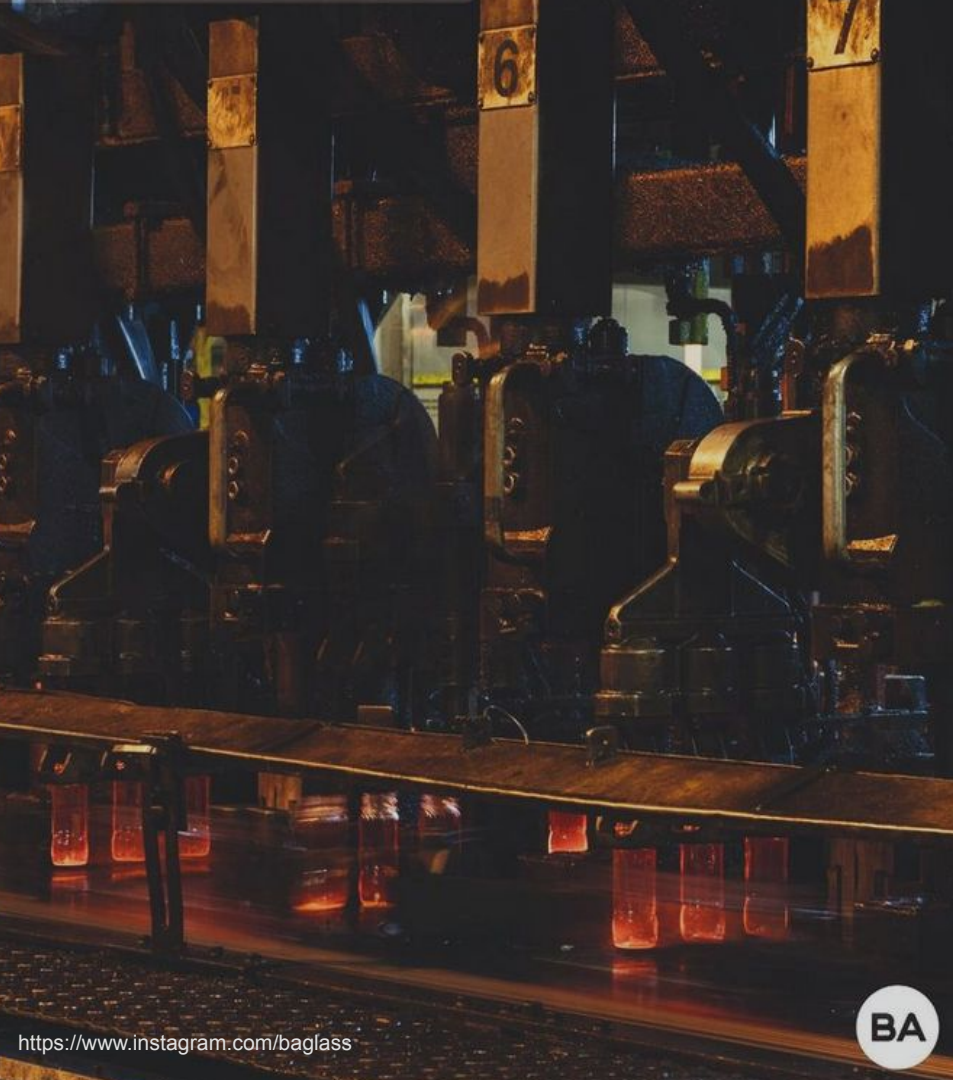
1. Glass Composition
2. Raw Materials Fusion
3. **Glass Forming**
4. Annealing and Surface Treatment
5. Inspection and Quality Control
6. Packaging





# Our Scope: Glass Forming





## The Problem

Data received: Dataset  
where every entry is a  
change to one timing of  
one movement (out of 47)



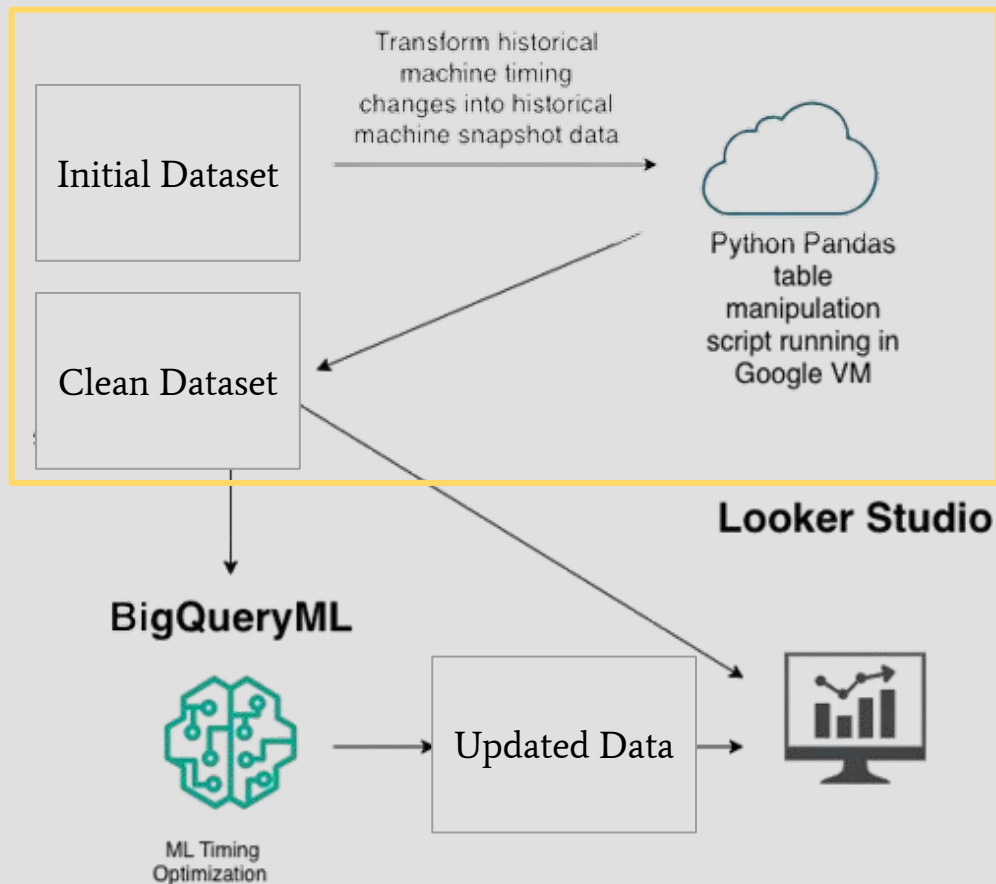
**Objective: Determine  
optimal timings.**

# Implementation

In supplied data, **every entry is just one timing change of one movement.**



Data had to be cleaned

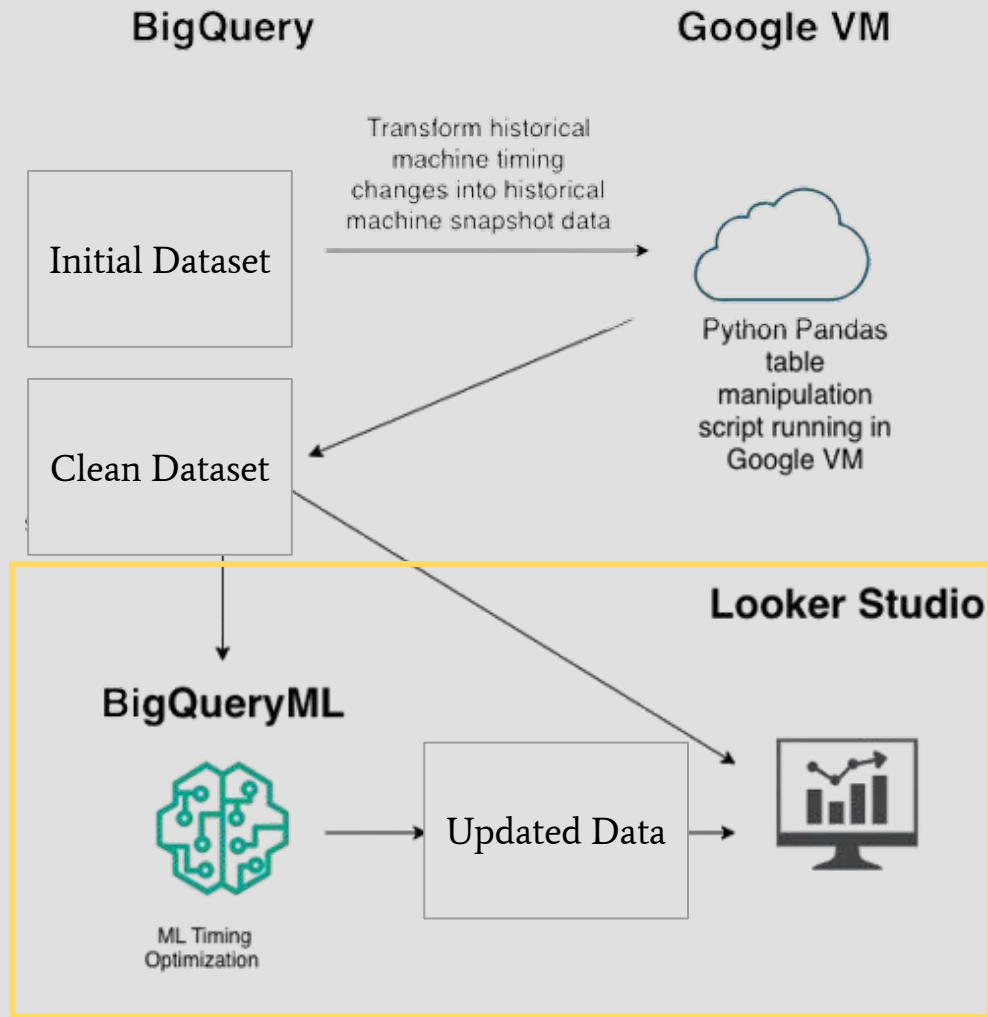


# Implementation

Data was transformed and  
**needs to be displayed in a  
comprehensible way**

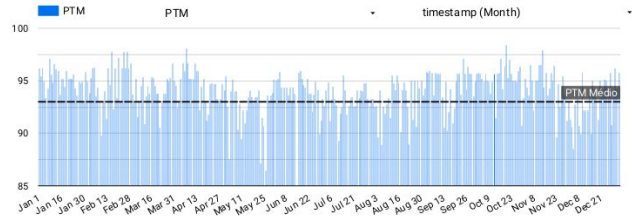
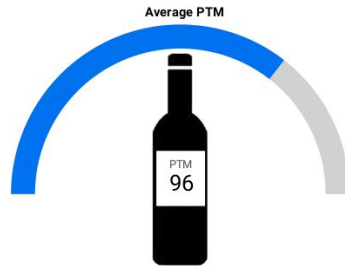


Dashboard was created



# Results

## BA Glass



### Ranking de Alteração de Eventos

Event	Record Count
1. BlankCoolingLH	313
2. BlankCoolingRH	310

timestamp (Date)	Shift	PTM
Oct 12, 2023	C	96
Oct 12, 2023	D	96

## BA Glass




	JobNumber	Reference...	Shift	PTM	Reference
1.	202303	0	A	95.2	
2.	202301	0	A	92.27	
3.	202304	0	A	93.74	
4.	202304	0	A	93.98	
5.	202303	0	A	93.74	
6.	202303	0	A	93.7	



# Results



	JobNumber	Reference...	Shift  ^	PTM	Reference
1.	202303	0	A	95.2	

# Major Takeaways

- Obtained a preliminary set of production values;
- Other factors influence productivity.

**The analysis done is just the first step.**



THANK YOU FOR  
LISTENING



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