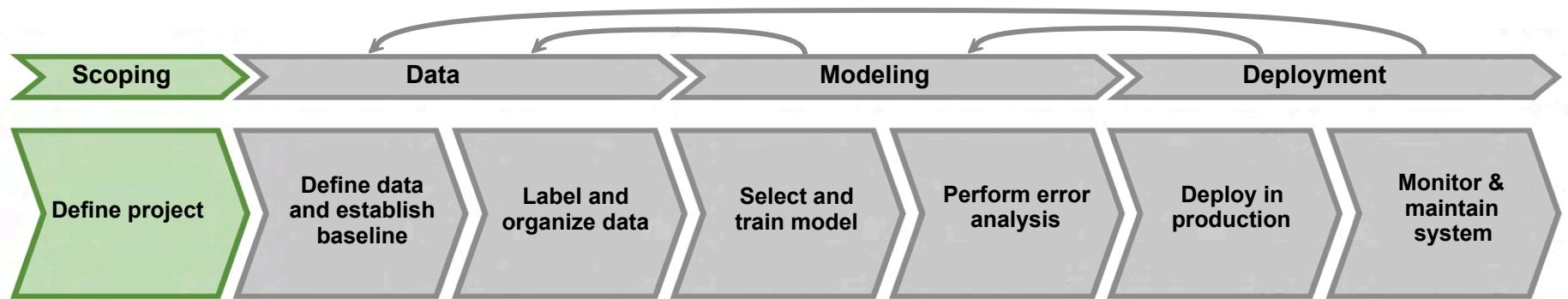




Scoping (optional)

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What is scoping?



Scoping example: Ecommerce retailer looking to increase sales

- Better recommender system
- Better search
- Improve catalog data
- Inventory management
- Price optimization

Questions:

- What projects should we work on?
- What are the metrics for success?
- What are the resources (data, time, people) needed?

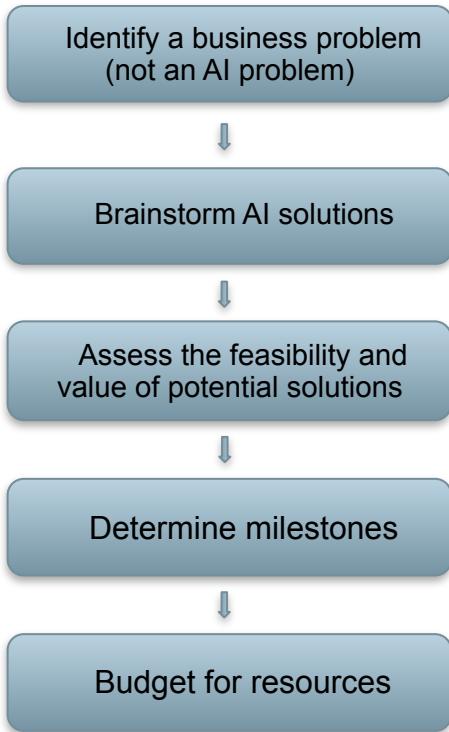
Scoping (optional)



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Scoping process

Scoping process



What are the top 3 things you wish were working better?

- Increase conversion
- Reduce inventory
- Increase margin (profit per item)

Separating problem identification from solution

Problem	Solution
Increase conversion	Search, recommendations
Reduce inventory	Demand prediction, marketing
Increase margin (profit per item)	Optimizing what to sell (e.g., merchandising), recommend bundles
What to achieve	How to achieve

Scoping (optional)



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Diligence on feasibility and value

Feasibility: Is this project technically feasible?

Use external benchmark (literature, other company, competitor)

	Unstructured (e.g., speech, images)	Structured (e.g., transactions, records)
New	HLP	<u>Predictive features available?</u>
Existing	HLP <u>History of project</u>	New predictive feature? History of project

HLP: Can a human, given the same data, perform the task?

Why use HLP to benchmark?

People are very good on unstructured data tasks

Criteria: Can a human, given the same data, perform the task?



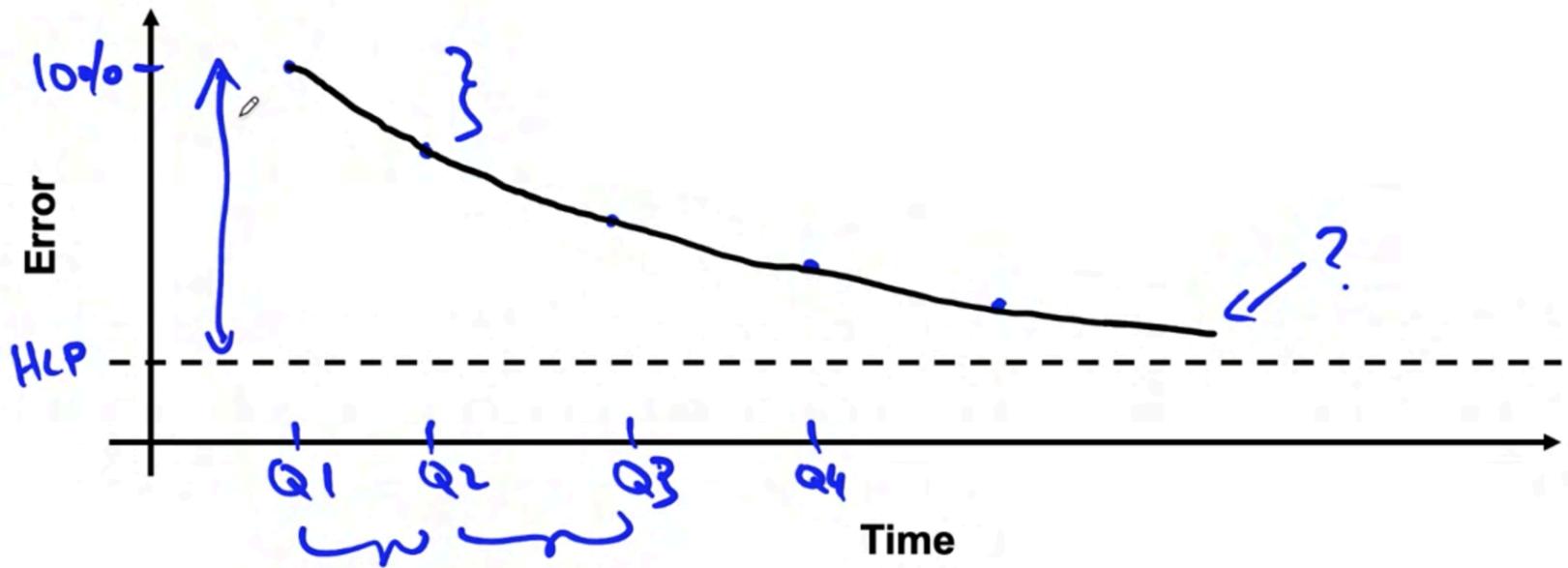
Do we have features that are predictive?

X

y

-  Given past purchases, predict future purchases 
-  Given weather, predict shopping mall foot traffic 
-  Given DNA info, predict heart disease 
-  Given social media chatter, predict demand for a clothing style 
-  Given history of a stock's price, predict future price of that stock 

History of project





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Scoping (optional)

Diligence on
value

Diligence on value



Have technical and business teams try to agree on metrics that both are comfortable with.

Fermi estimates

Ethical considerations

- Is this project creating net positive societal value?
- Is this project reasonably fair and free from bias?
- Have any ethical concerns been openly aired and debated?

Scoping (optional)



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Milestones and
resourcing

Milestones

Key specifications:

- ML metrics (accuracy, precision/recall, etc.)
- Software metrics (latency, throughput, etc. given compute resources)
- Business metrics (revenue, etc.)
- Resources needed (data, personnel, help from other teams)

Timeline

If unsure, consider benchmarking to other projects, or building a POC (Proof of Concept) first.