

# LLM Engineering

## MASTER AI & LARGE LANGUAGE MODELS





## PROGRESS

# Raising the bar on our baselines

### What you can now do

- Generate text and code with Frontier Models including AI Assistants with Tools, and with open-source models with HuggingFace transformers
- Create advanced RAG solutions with LangChain
- Follow a 5 step strategy to solve problems, including dataset curation and making a baseline model with traditional ML

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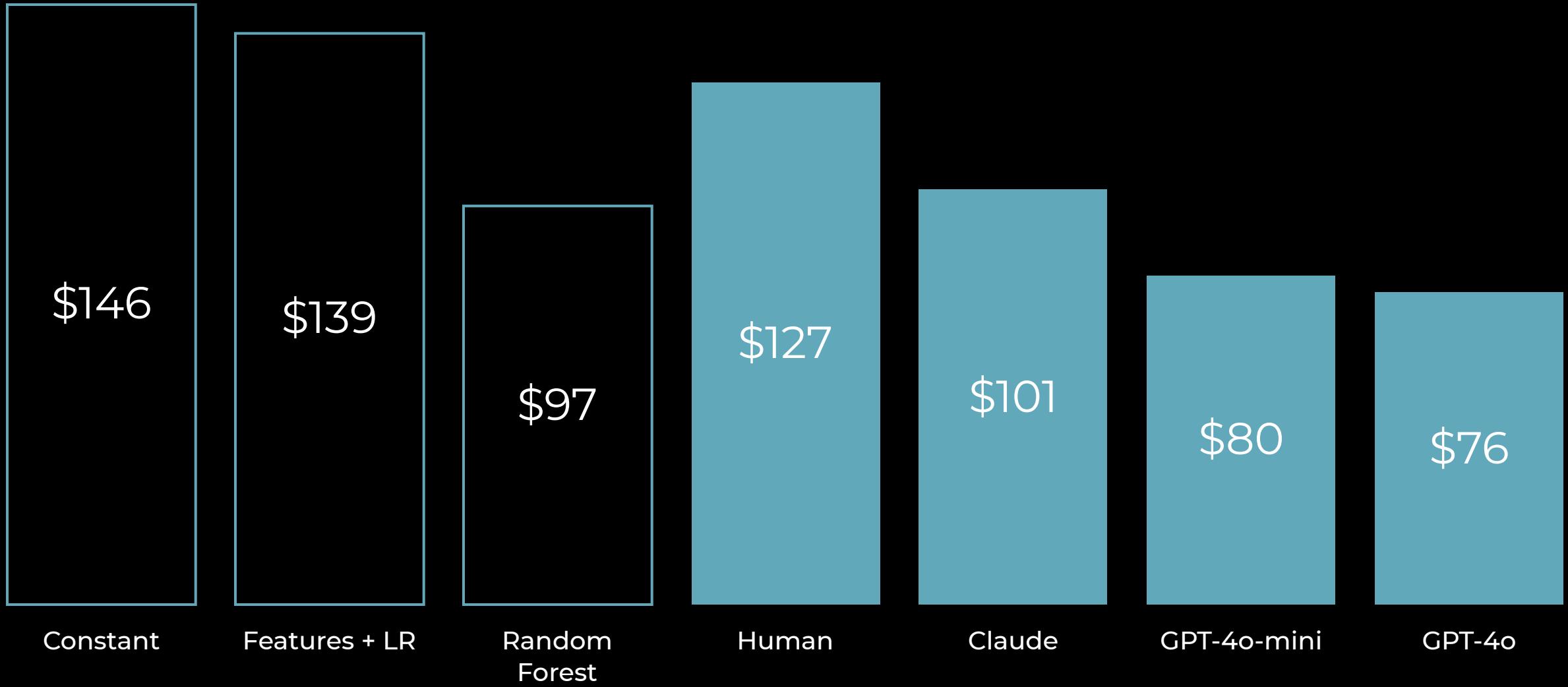
### After today you will be able to:

- Build a framework to solve a commercial problem using a Frontier model
- Run our test dataset against GPT-4o-mini
- Run our test dataset against Claude-3.5-Sonnet

A panoramic view of a futuristic landscape under a star-filled sky. In the foreground, a winding river of bright orange and yellow light flows through a valley. The landscape is dominated by jagged, purple-tinted mountains. The sky above is a deep purple, filled with numerous stars of varying sizes and colors, including several large, glowing spheres. A prominent white streak, resembling a comet or a meteor, cuts across the upper right portion of the sky.

To the Frontier!

# Average prediction error from our models



A stylized illustration of a man wearing a hat and a backpack, walking along a path made of large stones. In the background, several Moai statues stand on a grassy hillside under a sky with yellow and blue clouds.

## PROGRESS

To wrap up the week, we will fine-tune a Frontier model

### What you can now do

- Generate text and code with Frontier Models including AI Assistants with Tools, and with open-source models with HuggingFace transformers
- Create advanced RAG solutions with LangChain
- Follow a 5 step strategy to solve problems, including dataset curation and making a baseline model with traditional ML and making a Frontier solution

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### After next time you will be able to:

- Understand the process for Fine-Tuning a Frontier model
- Create the fine-tuning dataset and run fine-tuning
- Test a fine-tuned Frontier model