

AI Technology Solutions  
*to*  
Identify and Grade Food Images  
End-to-End Solutions Built on AWS Platform

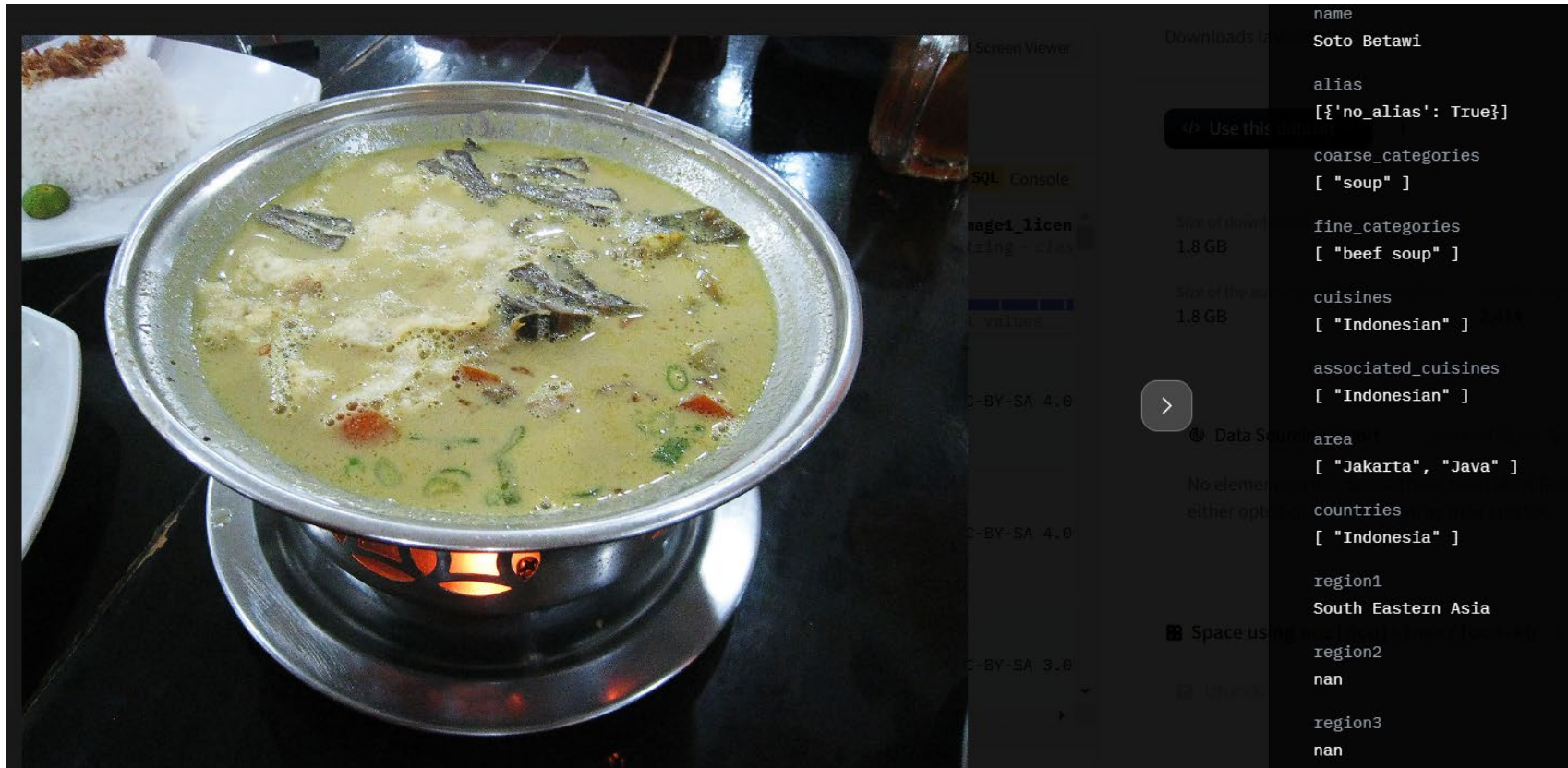
# Business Problem

The International Air Transport Association (IATA) estimates that passenger flights generate approximately six million tonnes of waste per year. Some 20% of this is untouched food and drink, which the association estimates to carry a value of \$4 billion.

Industry is exploring innovations for improving what's served up on the tray reduce wastage and improve passenger experience.

# Hugging Face Dataset

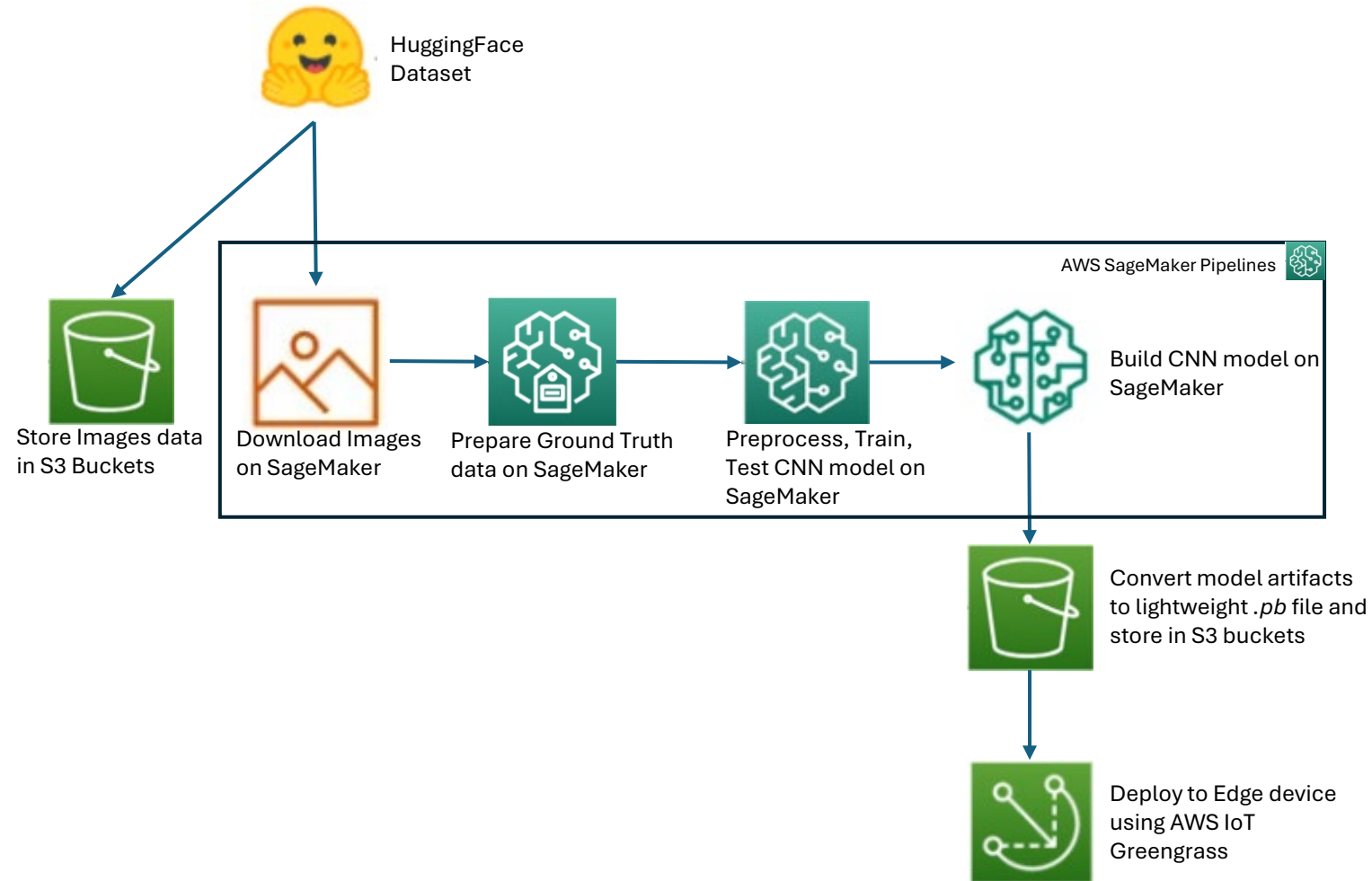
- 2400 different dishes from different cuisines
- Images and different dishes are identified but images are not graded
- worldcuisines/food-kb



## Two different AI solutions

	Identify food in a dish	Grade food quantity
Approach-1	Train and validate Image-classification model -Convolutud Neural Networks	Train and validate Image-grading model -Convolutud Neural Networks
Approach-2	Inference public API of Google Gemini LLM -Prompt Engineering of Multi-modal Image-to-Text LLMs	Inference public API of Google Gemini LLM -Prompt Engineering of Multi-modal Image-to-Text LLMs

# Training Convoluted Neural Network



# End-to-End AI solution with Google Gemini LLM

