

Case Study

CUSTOMER REQUESTS AT ONLINE BANK

To automatically triage future customer requests, **intent classification** is a standard Machine Learning task in customer service applications that requires well-labeled data. When run on a dataset of customer requests (text) annotated with 10 different intents, Cleanlab Studio found **over 5% of dataset labels were incorrect** and detected out-of-scope queries (outliers) like *"how much is 1 share of aapl"* and *"is android better than iphone"*.

This dataset was also used for **customer analytics**, to determine the relative frequencies of different types of customer requests and which types are most common. However, some conclusions drawn from the original dataset are inaccurate due to the mislabeling and out-of-scope issues. Significantly more accurate conclusions were obtained by running the same analytics on the cleaned version of the dataset obtained from Cleanlab Studio.

Customer Service Chat Request	Intent Category	
I no longer want to transfer, can we cancel the that?	Cancel Transfer	
How do i get another card	Getting Spare Card	
How do i find my new pin?	Cancel Transfer	← Label Error Suggestion: Change Pin
Please give me a mastercard instead.	Visa or Mastercard	
Can i have a duplicate second card?	Getting Spare Card	
Can I change my pin and get a new card?	Change Pin	← Ambiguous Suggestion: Getting Spare Card
Please help me change my pin.	Change Pin	
How do i change my card pin?	Change Pin	
Would you fight 1 horse-sized duck or 100 duck-sized horses?	Lost or Stolen Phone	← Outlier

Using Cleanlab Studio to auto-fix label issues in this dataset led to a **16% improvement in prediction error** without altering the existing LLM Transformer model or training code. Addressing additional data issues further enhanced accuracy **without any model changes**.

Businesses striving to make better decisions for customers must rely on accurate data-driven conclusions. These in turn rely on accurate data, which for this customer service application was easy to ensure with Cleanlab Studio.