

Accurate AI when you have little data

Specialized text is often too small to train a model on and too nuanced for a generic one. We built a prompt and context layer that needs no training data.

+32%

higher F1 than classical machine learning on the hardest category

0.89

F1 in one category, vs 0.87 for expert human coders

+11.9%

F1 gain from adding targeted assertions

THE CHALLENGE

Too little data, too much nuance

Classical machine learning needs large labeled datasets, and general-purpose models miss the meaning in specialized language. Having experts code everything by hand is slow and expensive.

WHAT WE DID

Built the context, not a new model

- ✓ Built a prompt and context layer on our ICI framework, with no training data
- ✓ Added targeted assertions to guide the model on rare, hard categories
- ✓ Compared results to expert human coders and to classical machine learning
- ✓ Tested a hybrid workflow with people and AI working together

RESULTS

- ✓ Beat classical machine learning by 32% F1 on the hardest category
- ✓ Matched or exceeded expert coders in one category
- ✓ People and AI together worked best

Read the research: [arXiv 2407.01551](#) · [EDM 2024](#)

WHAT IT SUPPORTS

F1 score

Agreement with experts

Coding time and cost

The studies used education data, and the method applies to any specialized text: customer feedback, open-ended survey answers, support tickets, or incident reports.

Sitting on text you cannot sort?

Start with a free 30-minute call. You leave with a clear next step.

[Book a free call →](#)