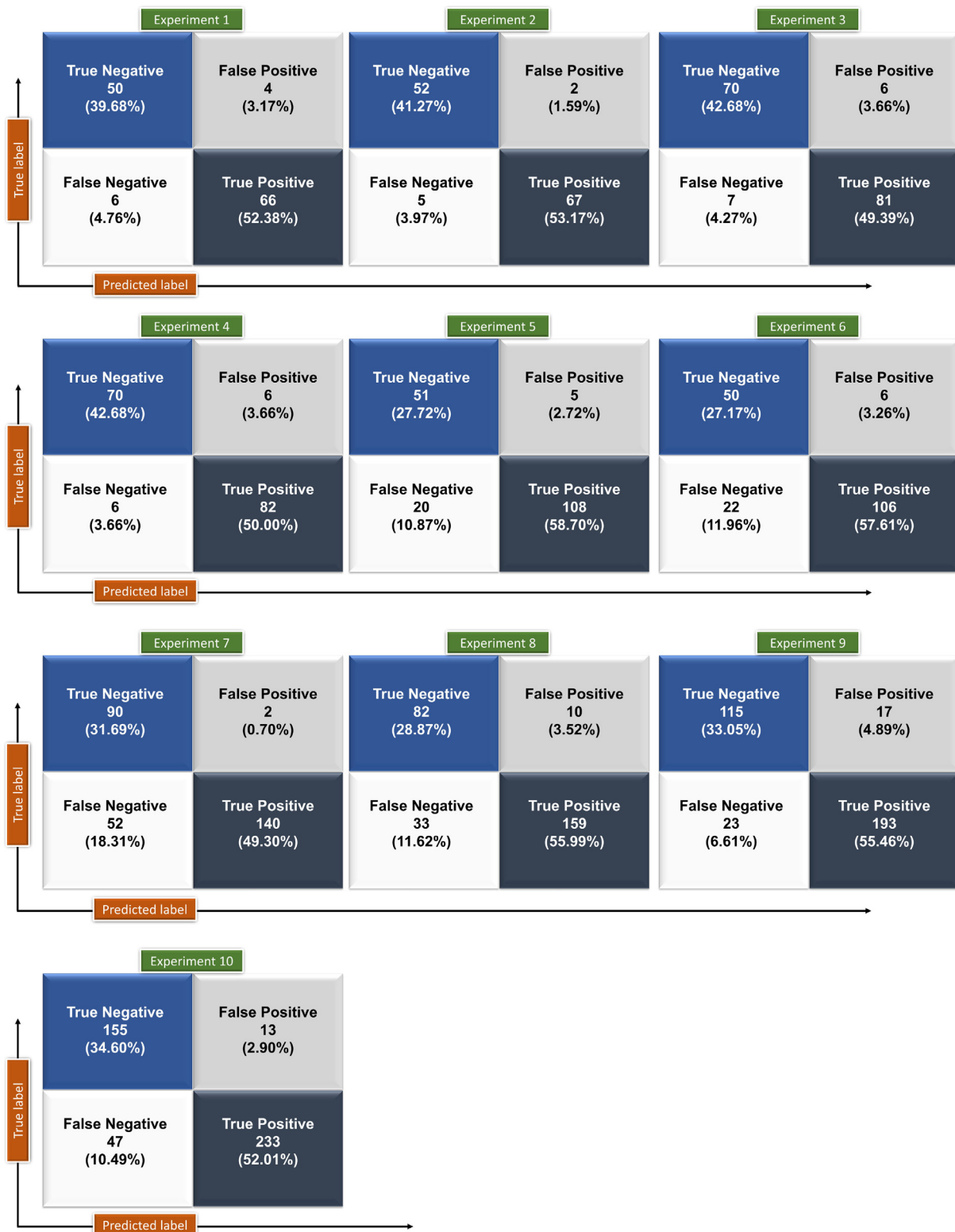


Supplementary Fig. S1. Computational workflow.



Supplementary Fig. S2. Confusion matrix analysis. The confusion matrix outcomes were displayed for Experiments 1 through 10 for the models trained with the Teachable Machine. This figure showed the results excluding items classified as Exception from the classification results. Altogether, it is clear that Experiments 2, and 4 had higher true positive rate/true negative rate ratios without exception labels as opposed to Experiments 1, and 3 having exception labels.

Supplementary Table S1. Summary of dataset characteristics

Experiment No.	Dataset	Exception label	Filtering
1	Clearly defined single-cell dataset	√	
2	Clearly defined single-cell dataset		√
3	Dataset with unclear morphology or closely spaced cells	√	
4	Dataset with unclear morphology or closely spaced cells		√
5	Fibroblast dataset 1	√	
6	Fibroblast dataset 1		√
7	Fibroblast dataset 2	√	
8	Fibroblast dataset 2		√
9	Merged dataset from Experiments 4 and 6		√
10	Merged dataset from Experiments 4 and 8		√