BOUNDDED STOPPING TIME OF SOME BAYES SEQUENTIAL TESTS FOR
THE $t$-TEST MODEL

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Abstract: For the $t$-test model the problem is to sequentially test whether the sign
of the mean is negative or positive. Consider normal-gamma priors and the following
three loss functions:

(i) linear combination of cost and $0 - 1$;
(ii) linear combination of cost and absolute error;
(iii) linear combination of cost and absolute error divided by the standard deviation.

For losses (i) and (iii) the Bayes test is shown to have bounded stopping time and
a bound on the maximum sample size is obtainable. For loss (ii) the Bayes test does
not have bounded stopping time. Intuitive explanations for these somewhat surprising
results are offered.

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