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BOUNDED 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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