The most pressing fine-tuning puzzles of the Standard Model — the cosmological constant and weak hierarchy problems, as well as the Higgs metastability — can all be understood as problems of near criticality. I will present a natural selection mechanism based on search optimization on the string landscape. The working assumption is that cosmological evolution on the multiverse has occurred for a finite time, much shorter than the exponentially-long global mixing time for the landscape. I will argue this imposes a strong selection pressure among hospitable vacua, favoring those that lie in optimal regions where the search algorithm is efficient. This satisfies the basic requirements for natural selection: a diverse gene pool, offered ab initio by the landscape; vacuum replication through cosmological expansion; and competition for a finite resource, namely the fraction of comoving volume. Optimality is defined by two competing requirements: search efficiency, which requires minimizing the mean-first passage time, and sweeping exploration, which requires recurrent random walks. Optimal landscape regions reach a compromise by lying at the critical boundary between recurrence and transience, thereby realizing the idea of self-organized criticality. The framework makes concrete phenomenological predictions: 1. The expected lifetime of our universe is \( \sim 10^{130} \) years, consistent with current Standard Model metastability estimates; 2. The SUSY breaking scale should be nearly Planckian; and 3. The predicted cosmological constant is \( M_{PI}^4/N \), which can account for the inferred vacuum energy if our optimal region contains \( N \sim 10^{120} \) vacua. Importantly, these predictions do not rely on anthropic reasoning and instead follow readily from optimality. The present framework suggests a correspondence between the near-criticality of our universe and non-equilibrium critical phenomena on the landscape.