Quiz 1

David Robinson

Since L is regular, there exists a DFA M that recognizes it.

To construct an NFA M' that recognizes L^R, first reverse all transition directions in M. Convert the original start state into an accept state. Introduce a new start state with an ε-transition to each of the original accept states, and convert those accept states into normal states.

Since M' is an NFA that recognizes L^R, and every NFA has an equivalent DFA, L^R is also regular. Thus, the class of regular languages is closed under reversal.