We present MLFix, an automatic statistical post-editing system, which is a spiritual successor to the rulebased system, Depfix. The aim of this

thesis was to investigate the possible approaches to automatic identification of the most common morphological errors produced by the state-of-the-art machine translation systems and to train sufficient statistical models built on the acquired knowledge. We performed both automatic and manual evaluation of the system and compared the results with Depfix. The system was mainly developed on the English-to-Czech machine translation output, however, the aim was to generalize the post-editing process so it can be applied to other language pairs. We modified the original pipeline to post-edit English-German machine translation output and performed additional evaluation of this modification.