The article presents a new classification of 3-dimensional Lie algebras. Although a decomposition of the moduli space was known classically, the new decomposition is consistent with deformation theory, and gives a decomposition of the space in terms of projective orbifolds, glued together by jump deformations. Also participating in this research was co-author Carolyn Otto, a UWEC student researcher, who also won a top award at the UWEC Student Research Day for a poster on the decomposition of a moduli space of associative algebras. The work here derives from a collaboration with Dr. Alice Fialowski, of the Eotvos Lorand University in Budapest. The work with Carolyn Otto is one of several collaborative works with Dr. Penkava and UW-Eau Claire undergraduate math majors.