An f-vector of a topological space is the sequence counting the number $d$-dimensional faces, where $d = 0, 1, \ldots$. For example the $f$-vector of a 3-dimensional cube is $(8,12,6)$ as it has 8 vertices, 12 edges and 6 faces. The following type of problems is thoroughly studied in several areas of mathematics (enumerative combinatorics, algebraic topology, theory of polytopes, …) which $f$-vectors are attained in a given family of topological spaces? We determine these $f$-vectors for the family of three-dimensional flag Gorenstein* complexes. The main ingredient is a reduction of the problem to a problem in extremal graph theory. The talk will be self-contained (both on the topology and the graph theory side). Joint work with Michał Adamaszek.