

RubyJeros: Mechanizing the Bott Algorithm

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Abstract

Given a root system and a non-orthogonal weight w , there exists an algorithm to bring w to a strictly dominant weight. This is called the Bott Algorithm which can be completely mechanized. We will discuss a computer program that performs the Bott Algorithm on a list of weights in order to calculate the cohomology or Euler characteristic of that list. We will provide a very simplistic introduction to root systems and weights.