Topic 2: Infinitesimal foliations, and representations from the metric viewpoint
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Abstract 2: We will study a generalization of representations of compact groups called infinitesimal foliations. We will first analyze the local and global structure of these foliations and their quotients. We will then prove that these foliations are algebraic. Finally, we will describe recent work of Gorodski-Lytchak who applied tools from metric geometry in the classification of representations of compact Lie groups, up to quotient equivalence.

Prerequisites 2:
Basic knowledge of Riemannian geometry (Riemannian metrics, geodesics, curvature tensor, shape operator, mean curvature, vector fields)