

## Exploring Backcountry Skiing

### Background:

This study delves into understanding potential backcountry skiing areas, considering avalanche risk, tree cover, slope aspects, and accessibility from roads. Our aim is to offer skiers practical insights for a safe and enjoyable backcountry skiing experience.

### Purpose:

Our primary goal is to show optimal backcountry skiing spots by assessing safety, and later enjoyability of slopes. We look to provide a balanced perspective, guiding skiers towards locations that combine safety with recreational enjoyment.

### Objectives:

Objective 1: Assess avalanche risk in different backcountry skiing spots.

Objective 2: Examine tree density and type in each area to understand the skiing environment.

Objective 3: Analyze hill slope percentage and orientation to consider its impact on the overall skiing experience.

Objective 4: Evaluate accessibility by assessing each spot's distance from roads and trailheads.

These objectives are designed to offer a comprehensive evaluation of potential backcountry ski locations, assisting skiers in making informed decisions for safety and enjoyment.

### Methods:

We'll use LiDAR data from the county, Land Coverage, Slope Names (from Utah avalanche center), Trailheads and Roads to study relevant factors. Information on how this data can affect skiing will be found through other sources to successfully synthesize this data.

Our approach involves using ArcGIS to process and interpret data related to avalanches, trees, slopes, and distances. We'll apply a suitability analysis to study areas best suited for backcountry skiing based on the collected data.

### Expected Outcomes:

Anticipated outcomes include identifying safe backcountry ski spots, and mapping the best routes based on the above criterium, allowing skiers an enjoyable and secure experience.

### Concerns:

While we approach this study carefully, there may be challenges. Many factors regarding avalanches are difficult to synthesize into a map, and enjoyability is completely subjective. Overcoming these challenges will be a large part of this analysis.

