

Fig. 1. Winning weight vectors for SOM with 2x3, 3x3, 4x3, and 5x3 nodes trained on the Ötztal data set.

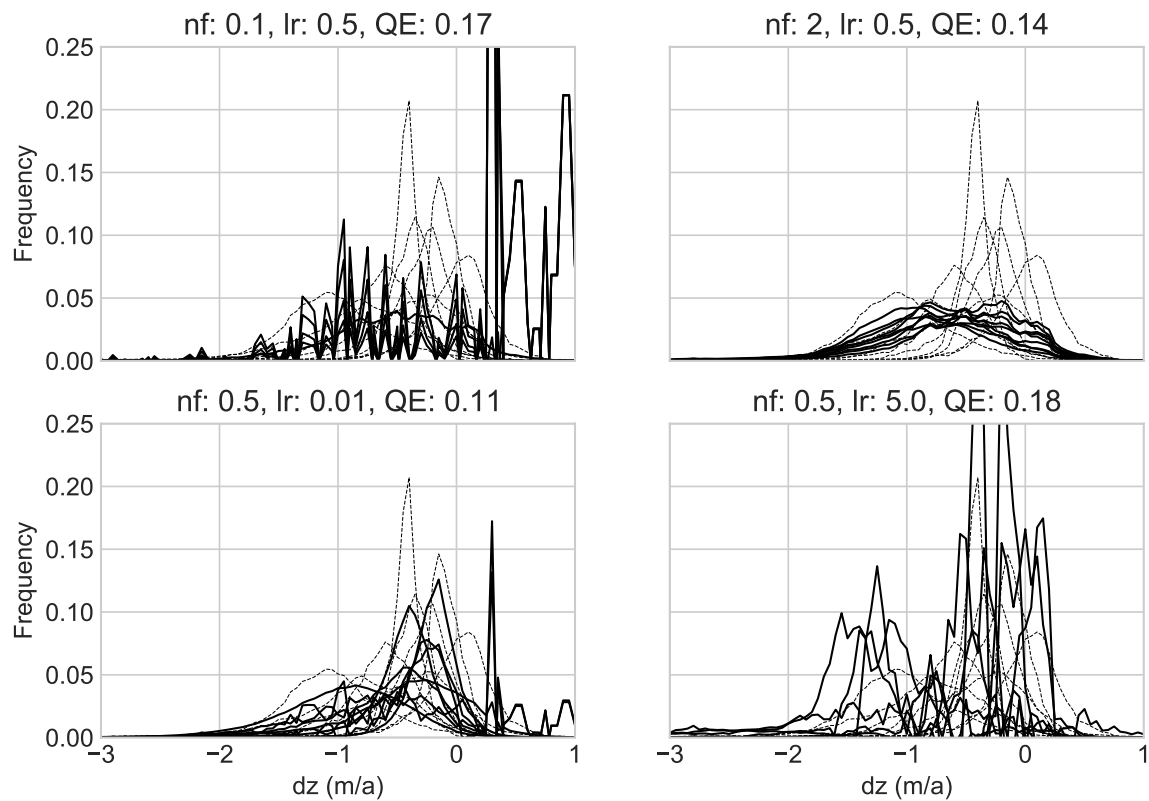


Fig. 2. Winning weight vectors (solid lines) for a 3x3 SOM trained on the Ötztal data set with different configurations of initial values for the neighbourhood function (nf) and learning rate (lr). Dashed lines show the weight vectors as used in our analysis for comparison (nf: 0.5, lr: 0.5, QE: 0.09).

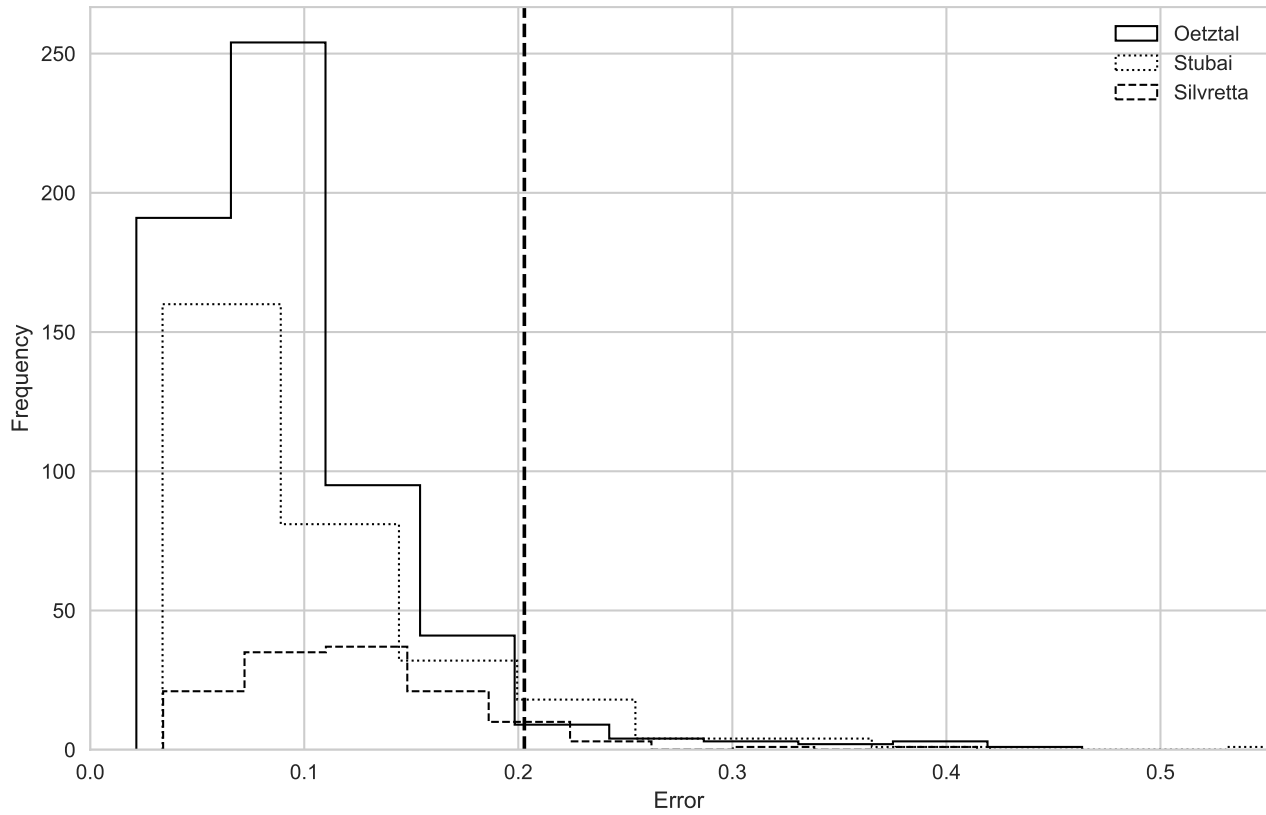


Fig. 3. Histogram of individual quantization errors for all input vectors compared to their assigned nodes. For Ötztal, 3 % of the data fall on the right side of the bold dashed line, 97 % on the left. The 3 % of data with the highest quantization errors are shown in red in Figure 6.

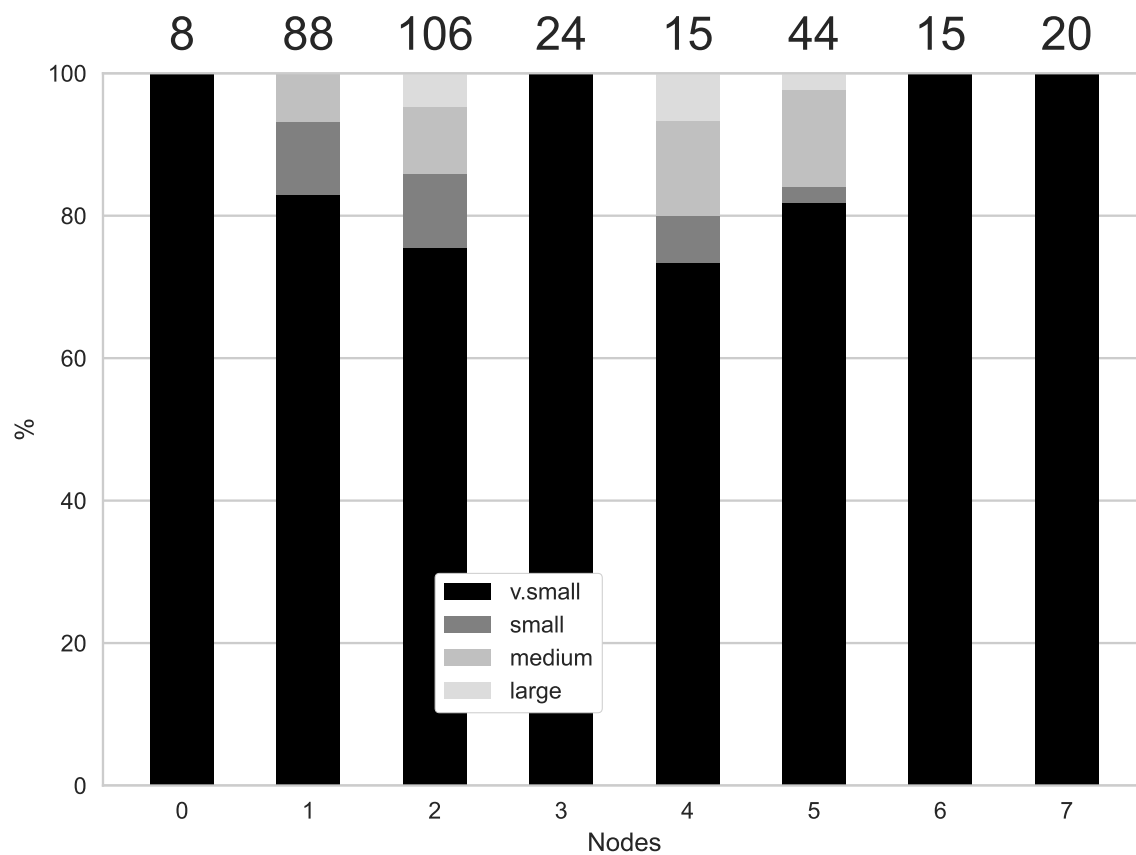


Fig. 4. Glacier size classes per node in period 3 for all three regions. V. small: glacier size $< 0.5 \text{ km}^2$, small: $0.5\text{-}1 \text{ km}^2$, medium: $1\text{-}5 \text{ km}^2$, large: glacier size $> 5 \text{ km}^2$. The numbers at the top of each bar correspond to the total number of glaciers in each node. Node 8 is not shown as no glaciers are mapped to this node in period 3.