Week 10 - Predictive modeling

L10-07. [Information] Searchlight analysis

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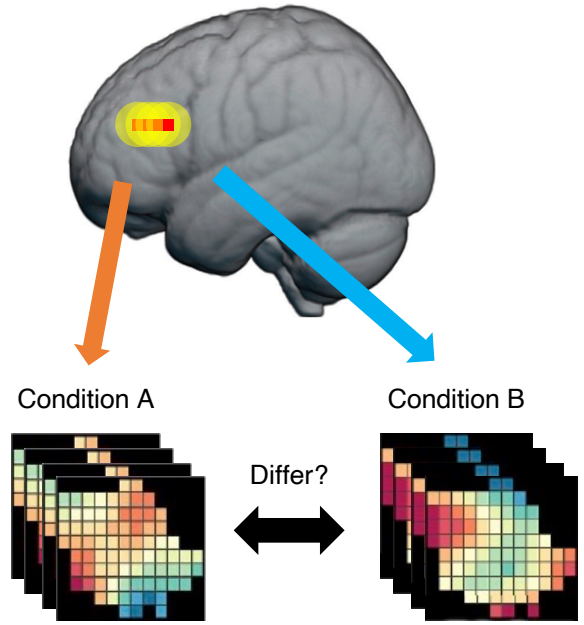
Searchlight analysis (Kriegeskorte et al., 2006, PNAS)

"Where in the brain does the *activity pattern* (instead of spatially averaged activity) contain information about the experimental condition?"(→ where does the local activity pattern change?)

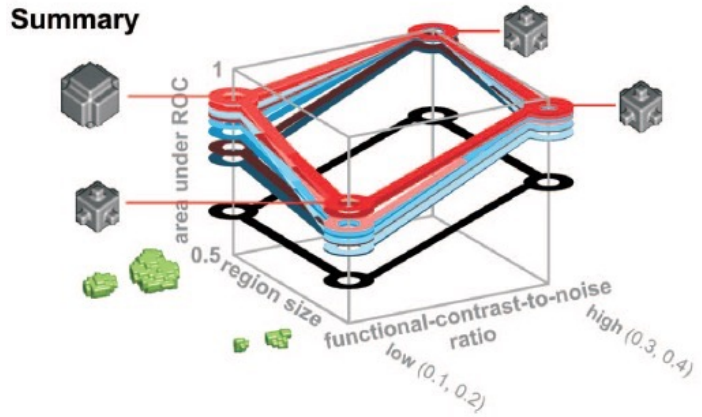
1. The "searchlight" is centered on each voxel in turn
2. Compute a multivariate effect statistic
3. Resulting map shows how well the multivariate signal in the local spherical neighborhood differentiates the experimental conditions

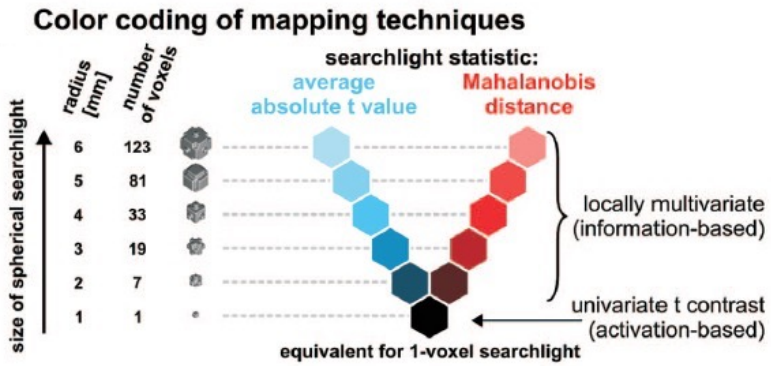
The activity pattern is replicable and can be estimated as the average across trials within each condition

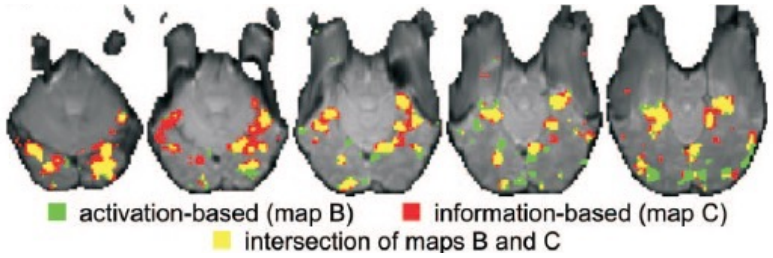
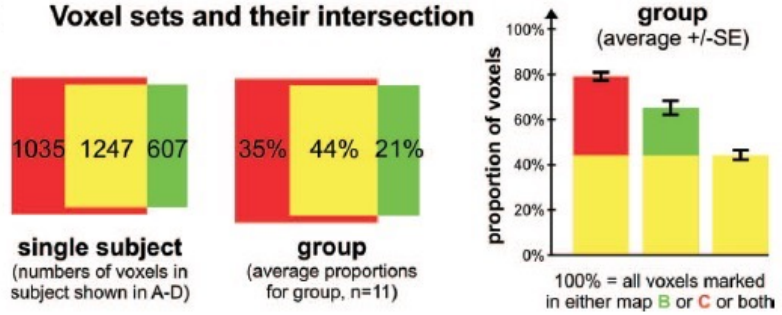


Searchlight analysis (Kriegeskorte et al., 2006, PNAS)

Simulated fMRI data





Best performance:
4-mm radius size

Real fMRI data