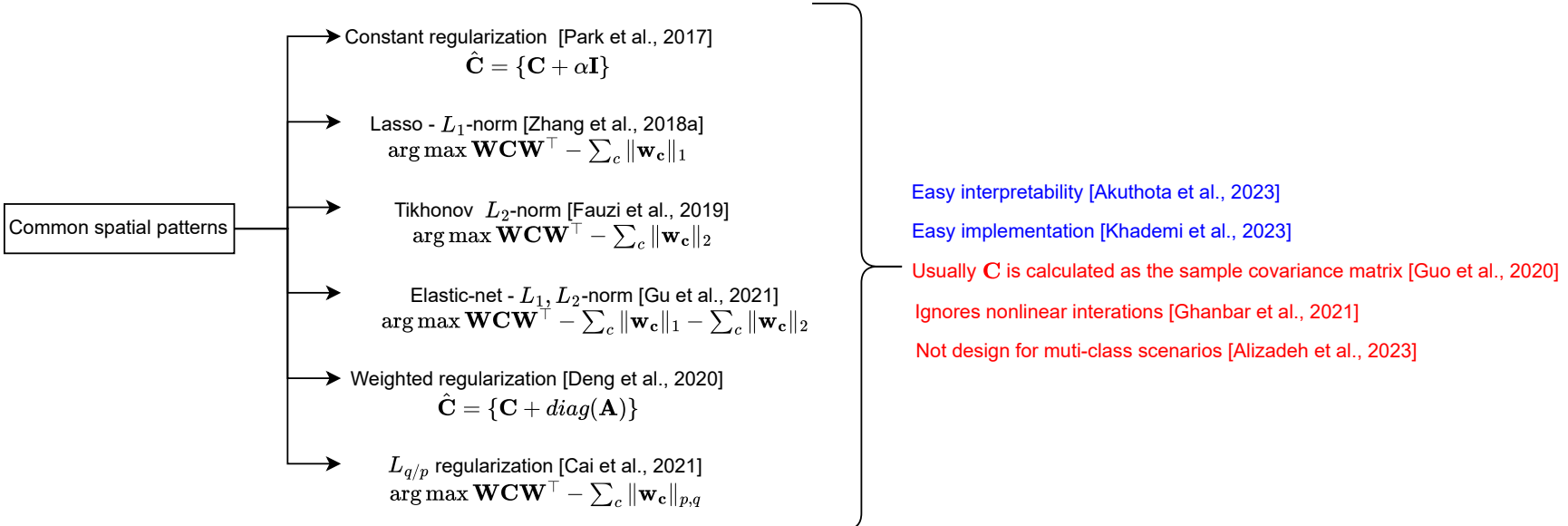
Common spatial patterns
Constant regularization [Park et al., 2017]
$\hat{\mathbf{C}} = \{\mathbf{C} + \alpha\mathbf{I}\}$
Lasso - L_1-norm [Zhang et al., 2018a]
$\arg\max \mathbf{WCW}^\top - \sum_c \|\mathbf{w_c}\|_1$
Tikhonov L_2-norm [Fauzi et al., 2019]
$\arg\max \mathbf{WCW}^\top - \sum_c \|\mathbf{w_c}\|_2$
Elastic-net - L_1, L_2-norm [Gu et al., 2021]
$\arg\max \mathbf{WCW}^\top - \sum_c \|\mathbf{w_c}\|_1 - \sum_c \|\mathbf{w_c}\|_2$
Weighted regularization [Deng et al., 2020]
$\hat{\mathbf{C}} = \{\mathbf{C} + diag(\mathbf{A})\}$
$L_{q/p}$ regularization [Cai et al., 2021]
$\arg\max \mathbf{WCW}^\top - \sum_c \|\mathbf{w_c}\|_{p,q}$
Easy interpretability [Akuthota et al., 2023]
Easy implementation [Khademi et al., 2023]
Usually $\mathbf{C}$ is calculated as the sample covariance matrix [Guo et al., 2020]
Ignores nonlinear interations [Ghanbar et al., 2021]
Not design for muti-class scenarios [Alizadeh et al., 2023]