

Regularizing the Forward Pass

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Abstract

We introduce an estimation framework that generalizes ordinary least squares, allows for nonparametric cluster effects,¹ and is inherently compositional, even under regularization.

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¹To clarify this point, in many applied microeconomic contexts, individuals grouped together in some fashion. In our context, this grouping is done via a shared zip code. We indicate this grouping via an indicator variable. The nonparametric component is that we allow these the effect of this group membership on the outcome of interest to vary across the other controls/features. That is, we don't place a functional form assumption on the way the cluster indicator variable interacts with the other controls.