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Yen-Chi Chen* (yenchic@uw.edu), Seattle, WA 98195, and **Mauricio Sadinle** (msadinle@uw.edu), Seattle, WA 98195. *Nonparametric Pattern-Mixture Models for Inference with Missing Data.*

Pattern-mixture models provide a transparent approach for handling missing data, where the full-data distribution is factorized in a way that explicitly shows the parts that can be estimated from observed data alone, and the parts that require identifying restrictions. We introduce a nonparametric estimator of the full-data distribution based on the pattern-mixture model factorization. Our approach uses the empirical observed-data distribution and augments it with a nonparametric estimator of the missing-data distributions under a given identifying restriction. Our results apply to a large class of donor-based identifying restrictions that encompasses commonly used ones and can handle both monotone and nonmonotone missingness. We propose a Monte Carlo procedure to derive point estimates of functionals of interest, and the bootstrap to construct confidence intervals. (Received August 16, 2019)