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Volodymyr Melnykov, Tuscaloosa, AL 35401, and **Xuwen Zhu*** (xzhu20@crimson.ua.edu),
Louisville, KY 40207. *Studying crime trends in the United States in the XXI century*. Preliminary
report.

Finite mixture models are famous for their flexibility in modeling heterogeneity in data. A novel approach is proposed and applied to the United States crime data collected between 2000 and 2012 years. A step-by-step model development is provided illustrating differences and improvements associated with every stage of the process. Results obtained by the final model are illustrated and thoroughly discussed. Multiple interesting conclusions have been drawn based on the developed model and obtained partition. (Received July 21, 2017)