

MITRE Infrastructure and Evaluation for Identity Resolution Technology

Dr. Keith Miller, Elizabeth Schroeder, Azar Ulrich, Dr. Karine Megerdoomian, Sarah McLeod, James Finley, Gail Hamilton, Dr. Andre Milota, Dr. Ken Samuel, Dr. Sherri Condon

The MITRE Corporation

{keith, eschroeder, aulrich, karine, smcleod, jtfinley, ghamilton, amilota, samuel, scondon}@mitre.org

Across the government, analysts must search multiple data sources in order to create a composite view of information about a person. This process is time consuming, difficult, and it is impossible for a human to carry out thoroughly when dealing with large amounts of data and shared data sources. Various systems claim to offer such identity matching and resolution capability as an automatic function. Before incorporating such systems into an analyst workflow or an information sharing environment it is important to determine how well those systems perform. This research focuses on developing an appropriate set of metrics to use in evaluating identity matching technologies, and creating an infrastructure and test data that can be brought to bear on performing such evaluations. The project also investigates maintaining privacy when sharing information and extending system evaluations to incorporate privacy concerns. The evaluation infrastructure is extensible to multiple use cases, such as sharing data across agencies or resolving identities in a single data source, and enables an objective comparison of different identity resolution systems to determine which is most appropriate for a given mission.