



U.S. Citizenship
and Immigration
Services

Person Centric Analysis



**Development for an Enhanced
Verification System**

March 2018

Setup: Problem Statement



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- Distributed Systems
- Varied Capabilities
 - Most limited to boolean matching

Solution: Early Testing



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- Tested various type of matching methodologies
 - Logistic Regression
 - Gradient Boosting
 - Random Forests
 - Neural Network
 - Graph Theory

Solution: Development and Deployment



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- Full performance depends on three stages:
 - Golden Records
 - Fuzzy Matching
 - Confidence Score Model



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End