The present invention provides a method and system for mobile social network analytics. The entire subscriber base forms a social segment for any telecom company. This is commonly known as telecom call graph. The present invention constructs social segments and computes social metrics of both segments and individual subscribers in the telecom network. The present invention further analyses the social segment graph and assigns segment score and churn propensity score to each subscriber using a mobile social network analytics system. The input to the mobile social network analytics system is CDR from external sources and information from campaigns, demographics and so on. The mobile social network analytics system processes the CDR, the other information and outputs segment score and churn score.