

Title of Research Article: ROPPSA: TV Program Recommendation Based on Personality and Social Awareness

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Supplementary Material

Dataset Description

The dataset utilized in the research article above involves relevant data collected from students in Accra Technical University (ATU), Ghana and is an extension from a dataset used in [1]. Data was gathered from students in Higher National Diploma (HND) Marketing ($n=2864$), HND Computer Science ($n=720$) and HND Building Technology ($n=812$). Therefore, the ATU dataset utilized in this paper contains a total of 4396 TV viewers (2421 males representing 55.07% and 1975 females representing 44.93%).

The ATU dataset in this research article contains tie strength data which comprises of computations of contact frequencies (Fig. 1) and contact duration (Fig. 2) of ATU students (users designated as TV viewers).

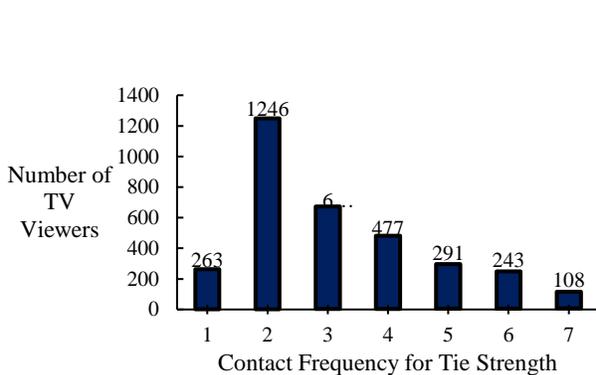


Fig. 1. ATU dataset – contact frequency trends.

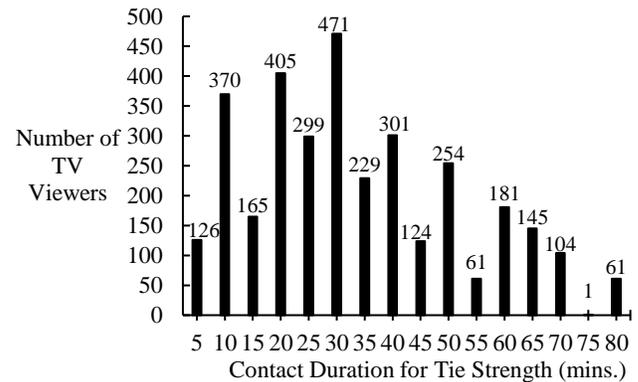


Fig. 2. ATU dataset – contact duration trends.

The ATU dataset also comprises of personality trait ratings (scale of 1 to 5) of all users (TV viewers) in accordance to the Big Five Personality Traits (BFPT). The total number of personality ratings for all the traits combined in the ATU dataset is 22,541. Fig. 3 illustrates the personality trait data utilized in our ATU dataset for experimentation.

Additionally, in order to ensure and substantiate recommendation accuracy in our experimentation procedure, we gathered TV program interests of TV viewers in accordance to the following: Movie/TV Series-*Horror, Action, Comedy, Adventure* and *Drama*; Sports/Games-*Football, Basketball, Hockey, Boxing* and *Athletics*. Tables 1 and 2 illustrate data regarding TV program interests of TV viewers in the ATU dataset in accordance to their ratings.

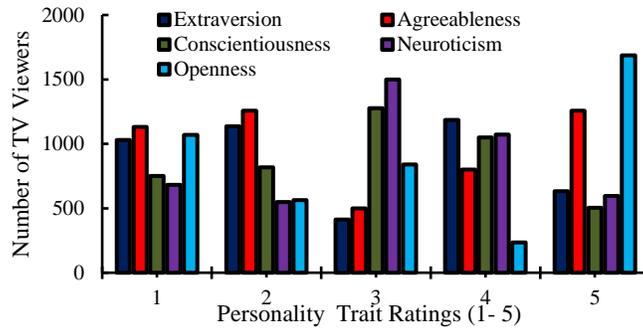


Fig. 3. ATU dataset – personality Data.

TABLE 1
ATU DATASET – SPORTS TV PROGRAM RATINGS

Category	Ratings (1 - 5)				
	1	2	3	4	5
Football	1975	0	0	0	2421
Basketball	1381	594	2421	0	594
Hockey	2978	108	570	148	592
Boxing	1381	0	594	1483	938
Athletics	1381	2077	0	938	0
Total Ratings	9097	2781	3588	2573	4550
Grand Total of all Ratings	22,589				

TABLE 2
ATU DATASET – MOVIE/TV SERIES PROGRAM RATINGS

Category	Ratings (1 - 5)				
	1	2	3	4	5
Horror	1890	2139	85	170	112
Comedy	167	1941	2039	146	1941
Action	114	108	1951	148	2075
Adventure	120	1477	525	1702	572
Drama	164	1805	129	2007	291
Total Ratings	2456	7472	4732	4177	4996
Grand Total of all Ratings	23,833				

REFERENCE

- [1] N. Y. Asabere, B. Xu, A. Acakpovi, and N. Deonauth, "SARVE-2: Exploiting Social Venue Recommendation in the Context of Smart Conferences," *IEEE Trans. on Emerging Topics in Comp.*, DOI: 10.1109/TETC.2018.2854718, 2018.