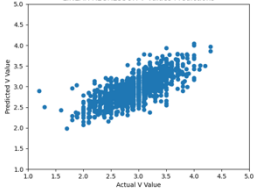
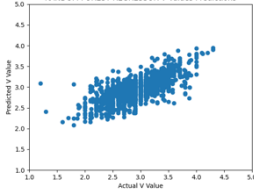
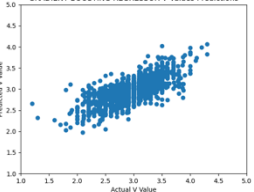
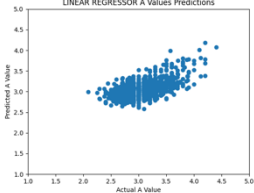
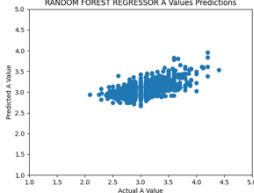
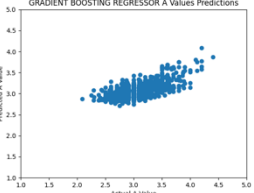


Dataset con l'embedding delle frasi

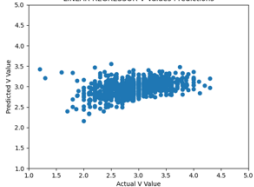
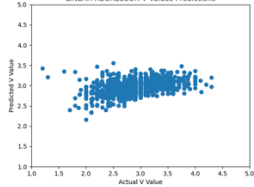
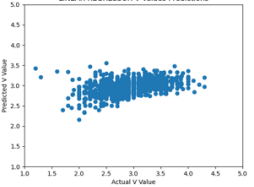
- Valence

LINEAR REGRESSOR MAE: 0.17994883497224234 MSE: 0.05911930602644773 RMSE: 0.24314461957124966 R^2: 0.5191450076568696	RANDOM FOREST REGRESSOR MAE: 0.17795349222111886 MSE: 0.06234062845746442 RMSE: 0.24968105346113953 R^2: 0.4929439393931737	GRADIENT BOOSTING REGRESSOR MAE: 0.17665499559246653 MSE: 0.05903367560889545 RMSE: 0.24296846628502114 R^2: 0.5198414944146474
		

- Arousal

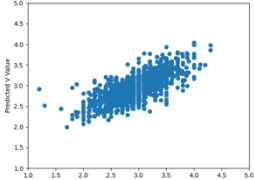
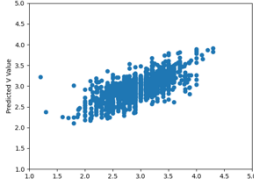
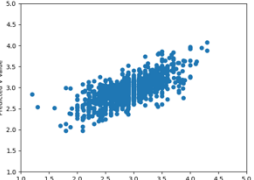
LINEAR REGRESSOR MAE: 0.17050541429271918 MSE: 0.048371224917990556 RMSE: 0.21993459236325366 R^2: 0.29598578526740593	RANDOM FOREST REGRESSOR MAE: 0.1590289946564525 MSE: 0.04357181385709752 RMSE: 0.2087386256951442 R^2: 0.3658383394448555	GRADIENT BOOSTING REGRESSOR MAE: 0.15582117461767503 MSE: 0.04106488014311282 RMSE: 0.20264471407641704 R^2: 0.4023252585383844
		

- Dominance

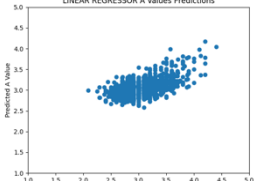

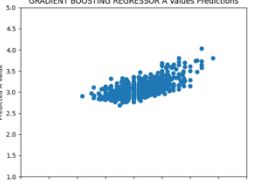
LINEAR REGRESSOR MAE: 0.1399727613589545 MSE: 0.03363253137084567 RMSE: 0.1833917429189375 R^2: 0.23701703131563534	RANDOM FOREST REGRESSOR MAE: 0.13507161535915263 MSE: 0.032231113354551484 RMSE: 0.17953025749035031 R^2: 0.2688094071748839	GRADIENT BOOSTING REGRESSOR MAE: 0.13398766607119308 MSE: 0.03221046527175916 RMSE: 0.1794727424200097 R^2: 0.2692778267336977
		

1. Rimozione della codifica dell'emozione

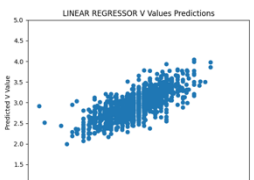
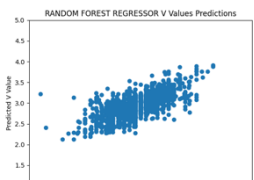
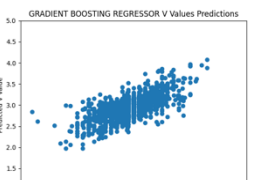
- Valence

LINEAR REGRESSOR MAE: 0.1800657714519333 MSE: 0.05917973156361667 RMSE: 0.24326884626605327 R ² : 0.5186535282541902	RANDOM FOREST REGRESSOR MAE: 0.18195178748758695 MSE: 0.06469283371345032 RMSE: 0.25434785965966045 R ² : 0.4738119549979142	GRADIENT BOOSTING REGRESSOR MAE: 0.17949537757265394 MSE: 0.061815172042285114 RMSE: 0.2486265714727312 R ² : 0.49721781128850107
		

- Arousal

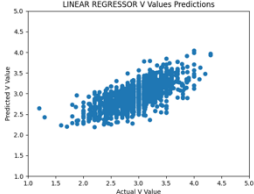
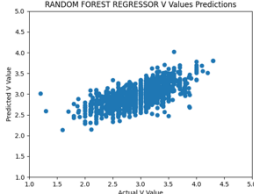
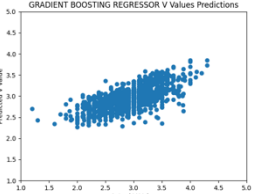
LINEAR REGRESSOR MAE: 0.17060922761401448 MSE: 0.04854917981704301 RMSE: 0.22033878418708544 R ² : 0.29339575826836606	RANDOM FOREST REGRESSOR MAE: 0.15925299008133545 MSE: 0.04397714082914041 RMSE: 0.20970727414455706 R ² : 0.35993904807035537	GRADIENT BOOSTING REGRESSOR MAE: 0.15573391354832097 MSE: 0.0411795913104639 RMSE: 0.2029275518761903 R ² : 0.4006557061848798
		

- Dominance

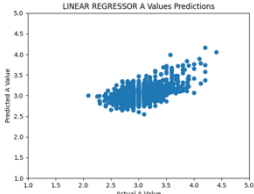
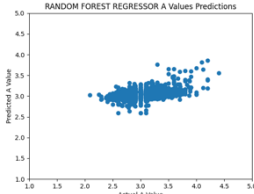
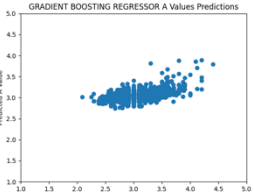
LINEAR REGRESSOR MAE: 0.1800657714519333 MSE: 0.05917973156361667 RMSE: 0.24326884626605327 R ² : 0.5186535282541902	RANDOM FOREST REGRESSOR MAE: 0.18187416418404503 MSE: 0.06500748194141012 RMSE: 0.2549656485517414 R ² : 0.4712527204362177	GRADIENT BOOSTING REGRESSOR MAE: 0.17939589982815646 MSE: 0.06181602298333271 RMSE: 0.24862828275023885 R ² : 0.4972108900426606
		

2. Rimozione dei valori delle altre due dimensioni conosciute

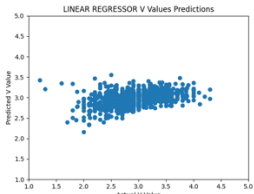
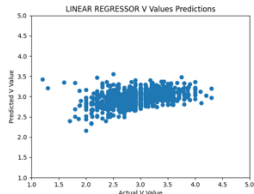
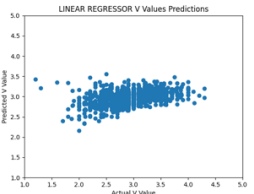
- Valence

LINEAR REGRESSOR	RANDOM FOREST REGRESSOR	GRADIENT BOOSTING REGRESSOR
MAE: 0.18953873073843272 MSE: 0.06452990123609942 RMSE: 0.2540273631640879 R^2: 0.47513718867223986	MAE: 0.19322934110396092 MSE: 0.07114682455057446 RMSE: 0.26673362096026526 R^2: 0.4213175344243777	MAE: 0.19397036927989017 MSE: 0.07049577290807718 RMSE: 0.2655104007531102 R^2: 0.4266129523446752
		

- Arousal

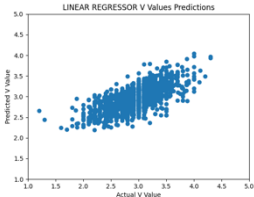
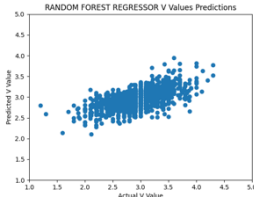
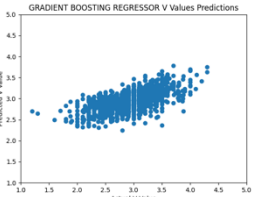
LINEAR REGRESSOR	RANDOM FOREST REGRESSOR	GRADIENT BOOSTING REGRESSOR
MAE: 0.17302068420958538 MSE: 0.04967861268230001 RMSE: 0.22288699531892842 R^2: 0.27695753920165467	MAE: 0.1776259323977967 MSE: 0.053872761845100085 RMSE: 0.23210506639257164 R^2: 0.2159142095293921	MAE: 0.1751646403732336 MSE: 0.05227940680446749 RMSE: 0.2286469042092359 R^2: 0.23910453806920062
		

- Dominance

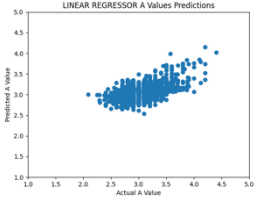
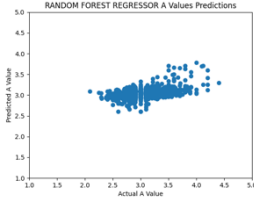
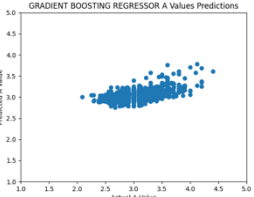
LINEAR REGRESSOR	RANDOM FOREST REGRESSOR	GRADIENT BOOSTING REGRESSOR
MAE: 0.14742674009080584 MSE: 0.03787417588029718 RMSE: 0.1946128872410488 R^2: 0.14079166890564332	MAE: 0.1456798869624242 MSE: 0.03819053512556162 RMSE: 0.19542398810166992 R^2: 0.13361478669415905	MAE: 0.14564809230046658 MSE: 0.038128487935658054 RMSE: 0.195265173381374 R^2: 0.13502238068787742
		

3. Rimozione della codifica dell'emozione e dei valori delle altre due dimensioni conosciute

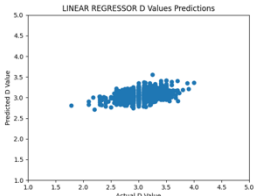
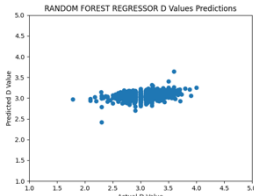
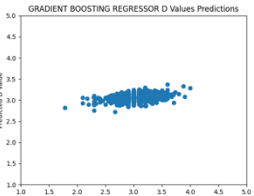
- Valence

LINEAR REGRESSOR MAE: 0.18958695782822485 MSE: 0.0645485462269476 RMSE: 0.25406405929794085 R ² : 0.4749855370793147	RANDOM FOREST REGRESSOR MAE: 0.20153961383036095 MSE: 0.07607448869144008 RMSE: 0.2758160413961452 R ² : 0.38123770159167425	GRADIENT BOOSTING REGRESSOR MAE: 0.19928964627567367 MSE: 0.07399389003723854 RMSE: 0.27201817960797864 R ² : 0.3981605364011296
		

- Arousal

LINEAR REGRESSOR MAE: 0.1731288586593721 MSE: 0.049914092679199065 RMSE: 0.2234146205582774 R ² : 0.2735302688486051	RANDOM FOREST REGRESSOR MAE: 0.1789700013310383 MSE: 0.05527685175612682 RMSE: 0.23511029700148572 R ² : 0.19547852162193546	GRADIENT BOOSTING REGRESSOR MAE: 0.1773419251234713 MSE: 0.05339555505180502 RMSE: 0.23107478237965523 R ² : 0.222859686616816
		

- Dominance

LINEAR REGRESSOR MAE: 0.14787419658661774 MSE: 0.037959569269478265 RMSE: 0.19483215666177456 R ² : 0.13885444625460375	RANDOM FOREST REGRESSOR MAE: 0.14705395597046708 MSE: 0.03867627620247228 RMSE: 0.1966628490652779 R ² : 0.1225953316080487	GRADIENT BOOSTING REGRESSOR MAE: 0.14621431119732087 MSE: 0.038063910933796026 RMSE: 0.19509974611412498 R ² : 0.13648736564681918
		

- Summary dei risultati

Per la predizione dei valori di Valence e Arousal i risultati migliori (tenendo particolare attenzione all'RMSE) si hanno con il dataset ottenuto con la rimozione della codifica dell'emozione e dei valori delle altre due dimensioni conosciute. Per i valori di Dominance, i risultati migliori sono stati ottenuti utilizzando il modello random forest sul dataset ottenuto rimuovendo la codifica dell'emozione. Di seguito una tabella ricapitolativa dove vengono mostrati solamente i valori della metrica RMSE per ogni dataset e modello utilizzato. I modelli con i risultati migliori (in termini di RMSE) sono evidenziati in verde:

Dataset con l'embedding delle frasi	
Valence	
	LINEAR REGRESSOR: (RMSE): 0.24314461957124966
	RANDOM FOREST REGRESSOR (RMSE): 0.24968105346113953
	GRADIENT BOOSTING REGRESSOR (RMSE): 0.24296846628502114
Arousal	
	LINEAR REGRESSOR: (RMSE): 0.21993459236325366
	RANDOM FOREST REGRESSOR (RMSE): 0.2087386256951442
	GRADIENT BOOSTING REGRESSOR (RMSE): 0.20264471407641704
Dominance	
	LINEAR REGRESSOR: (RMSE): 0.1833917429189375
	RANDOM FOREST REGRESSOR (RMSE): 0.17953025749035031
	GRADIENT BOOSTING REGRESSOR (RMSE): 0.1794727424200097
Dataset con rimozione della codifica dell'emozione	
Valence	
	LINEAR REGRESSOR: (RMSE): 0.24326884626605327
	RANDOM FOREST REGRESSOR (RMSE): 0.25434785965966045
	GRADIENT BOOSTING REGRESSOR (RMSE): 0.2486265714727312
Arousal	
	LINEAR REGRESSOR: (RMSE): 0.22033878418708544
	RANDOM FOREST REGRESSOR (RMSE): 0.20970727414455706
	GRADIENT BOOSTING REGRESSOR (RMSE): 0.2029275518761903
Dominance	
	LINEAR REGRESSOR: (RMSE): 0.24326884626605327
	RANDOM FOREST REGRESSOR (RMSE): 0.2549656485517414
	GRADIENT BOOSTING REGRESSOR (RMSE): 0.24862828275023885
Dataset con rimozione dei valori delle altre due dimensioni conosciute	
Valence	
	LINEAR REGRESSOR: (RMSE): 0.2540273631640879
	RANDOM FOREST REGRESSOR (RMSE): 0.26673362096026526
	GRADIENT BOOSTING REGRESSOR (RMSE): 0.2655104007531102
Arousal	
	LINEAR REGRESSOR: (RMSE): 0.22288699531892842
	RANDOM FOREST REGRESSOR (RMSE): 0.23210506639257164
	GRADIENT BOOSTING REGRESSOR (RMSE): 0.2286469042092359
Dominance	
	LINEAR REGRESSOR: (RMSE): 0.1946128872410488
	RANDOM FOREST REGRESSOR (RMSE): 0.19542398810166992
	GRADIENT BOOSTING REGRESSOR (RMSE): 0.195265173381374
Dataset con rimozione della codifica dell'emozione e dei valori delle altre due dimensioni conosciute	
Valence	
	LINEAR REGRESSOR: (RMSE): 0.25406405929794085
	RANDOM FOREST REGRESSOR (RMSE): 0.2758160413961452
	GRADIENT BOOSTING REGRESSOR (RMSE): 0.27201817960797864
Arousal	
	LINEAR REGRESSOR: (RMSE): 0.2234146205582774
	RANDOM FOREST REGRESSOR (RMSE): 0.23511029700148572
	GRADIENT BOOSTING REGRESSOR (RMSE): 0.23107478237965523
Dominance	
	LINEAR REGRESSOR: (RMSE): 0.19483215666177456
	RANDOM FOREST REGRESSOR (RMSE): 0.1966628490652779
	GRADIENT BOOSTING REGRESSOR (RMSE): 0.19509974611412498