

Divorce Case Prediction using Machine Learning

Ankush Chougule¹, Renuka Shinde², Sankalp Nagpure³, Sachin Kadam⁴

Students, Department of Computer Engineering^{1,2,3,4}

Sinhgad Institute of Technology, Lonavala, Maharashtra, India

Abstract: *The number of divorce cases has seen a significant increase worldwide in recent years. In India, for instance, the divorce rate has risen from 1 in 1000 to 13 in 1000 over the last few decades, which is a major concern for marriage counselors and therapists. Consequently, there is a need for an effective technique to predict divorce cases that can assist therapists in identifying the severity of a situation. This paper presents a study on divorce case prediction using various machine learning algorithms such as Perceptron classifier, Decision Tree classifier, Random Forest classifier, Naive Bayes classifier, K-Nearest Neighbor classifier, and Support Vector Machine classifier. The authors have employed the Gottman method as a criteria for making predictions. After training, these algorithms predict whether a divorce will occur or not, which can help the therapist analyze the level of tension between a couple and counsel them accordingly. The authors achieved the highest accuracy of 98.5% with the Perceptron model.*

Keywords: Divorce prediction, Machine learning, Classification algorithms, Random forest, Logistic regression, Decision tree, Support vector machine, Neural network

REFERENCES

- [1]. E. Lisitsa, "An introduction to the gottman method of relationship therapy," <https://www.gottman.com/blog/an-introduction-to-the-gottman-method-of-relationship-therapy/>, May 2013
- [2]. M. Irfan, W. Uriawan, O. Kurahman, M. Ramdhani, and I. Dahlia, "Comparison of naive bayes and k-nearest neighbor methods to predict divorce issues," in IOP Conference Series: Materials Science and Engineering, vol. 434, no. 1. IOP Publishing
- [3]. M. K. Yöntem, A. Kemal, T. Ilhan, and S. KILIÇARSLAN, "Divorce prediction using correlation based feature selection and artificial neural networks," Nevşehir Hacı Bektaş Veli Üniversitesi SBE Dergisi, vol.
- [4]. S. Goel, S. Roshan, R. Tyagi, and S. Agarwal, "Augur justice: A supervised machine learning technique to predict outcomes of divorce court cases," in 2019 Fifth International Conference on Image Information