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Hassles in medical appointment

Background
Quoted by Journal of Royal Society of Medicine "30% of patients miss their scheduled medical appointments." Why so?
A person makes an appointment with a doctor, receives all the instructions and does not show up. Who is to be blamed?

Objective
The inspiration behind this project is simple, what if it is possible to predict if a person will show up for an appointment? There could be prodigious advantages of this prediction, namely proper utilization of health care resources.

Scope
The aim of the project is to use *Back propagation* to train the *Neural Network* to predict if the patient will show up for the appointment or not. We are also keen on using Tensor Flow library. In the already existing models with linear regression, an accuracy of 69% is obtained. We aim to improve the accuracy of the prediction model with our algorithm.

Technology Stack
Programming Languages: Python, R
Version Control: Git

Inputs and Outputs
Inputs: 300k medical appointments and its 15 variables (features) of each. The most important one is if the patient will show-up or not for the appointment. Variable names in the dataset are self-explanatory.
Outputs: Accuracy, Sensitivity and Specificity of the prediction model proposed.

Team
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Responsibilities
Namrata Bilurkar: Tensor Flow working and its usage.
Suraj Nair: Neural network and different ways of implementation.
Shared responsibilities: Data preprocessing which includes Data cleaning, data transformation and data reduction.

References
Back propagation with Neural Networks - https://goo.gl/AJgUqD
Data set: https://goo.gl/LcTyE8
Tensor Flow: https://goo.gl/74W9n2