Abstract

In this paper, we are interested in cohort search, representation, and prediction. Information retrieval and text mining technique were proposed based on Term Frequency Inverse Document Frequency (TF-IDF) to extract important terms. Also, a formal and algorithmic model was formulated to compute: readable, concise cohorts of patients and find similarities between patient trajectories.

Finally, Patient health trajectories were analyzed using a Deep Learning architecture from intensive experimental processes based on two parallel Minimal Gated Recurrent Unit networks, working in a bi-directional manner. The obtained result shows an improvement in the performance of computer-aided medicine and serves as a guide in designing artificial neural networks used in prediction tasks.

References

Index Terms

Computer Science

Information Sciences
Keywords

TF-IDF, EMR, Cohort, Neural Networks, Deep Learning, Patient Trajectory