Medicine Recommender System from Electronic Health Records

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***Abstract*—hello World**

***Index Terms*—Recommender Systems, Health Care AI, Collaborative Filtering, Electronic Health Records.**

I. Introduction

With over 20,000 prescription-only FDA approved medications, doctors may face a challenge when prescribing medicine to a specific patient. Unfortunately, the FDA receives more than 100,000 declarations of medication errors each year in the United States alone [1]. Modern hospitals use Electronic Health Records (EHR) to keep track of everything and deal with this complexity [2].

EHRs are a collection of clinical information gathered from health care patients. The mass adoption of such systems deliver a large amount of data compiled on a patient's demographics, diagnosed conditions, medical prescriptions, procedures and any health-related history [2].

This data provides opportunities for machine learning systems to improve and automate clinical care practices, for example, early disease detection and identifying patients at high risk of severe conditions [3], [4].

A system that suggests a list of medicine based on a patient's current state will serve as an essential decision-support tool for medical experts to assist with patient prescriptions. Recommender Systems (RS) are techniques to derive patterns and deal with complex drugs and user information to recommend personalised results.

In this study, we will try to answer the following research question:

Can a Recommender System predict and suggest a list of personalised medication to a patient using information from an EHR.

II. Aim and Objectives

A. Aim

The main of this proposed project is to ...

B. Objectives

Tom achieve the above mention aim a number of objectives have been set and that will later be tested in an exercise to evaluate the success of reaching the same aim.

- The first objective ...
- The second objective ...
- The third objective ...

III. Background

A. Techniques

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B. Similar Systems

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IV. Proposed Idea

A. Testing and Evaluation

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B. Challanges and Limitations

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References

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