Drug Side-Effect
Natural Language Processing Track

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ABSTRACT

In this project we trained a model to predict the disease based on the side effects of the drug the patient were taking. The pills were for Birth Control, Depression, Pain, Anxiety, Acne and Bipolar Disorde .

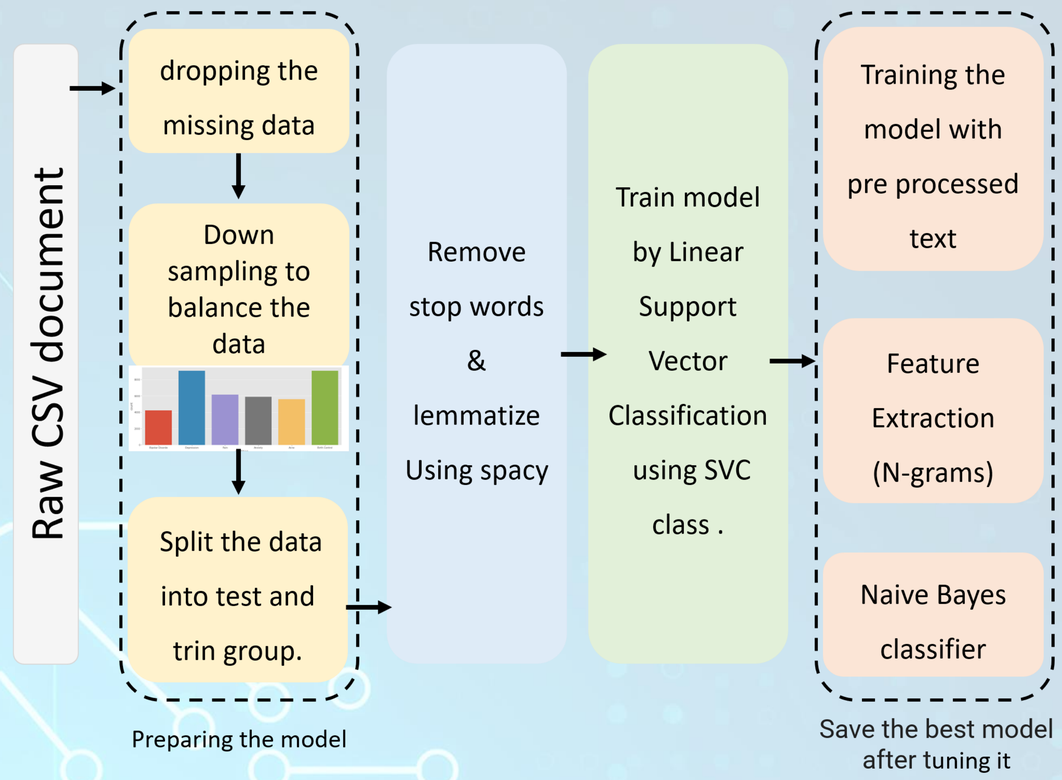
الملخص

في هذا المشروع قمنا بتدريب نموذج ليستطيع التنبؤ بما يعاني منه المريض من خلال الأعراض الجانبية التي يعاني منها المريض لكل من حبوب منع الحمل ، والاكتئاب ، والألم ، والقلق ، وحب الشباب واضطراب ثنائي القطب.

INTRODUCTION

In the past couple years the AI proved it benefit during the covid-19 crisis in clinicians, researchers and the patients they serve are steadily increasing. which is why we decided to choose a project in clinical field.

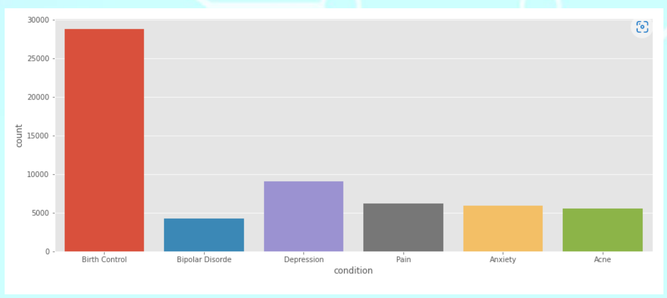
APPROACH



DATASET AND TOOLS

set content over 1000s classes we eliminate the one that has less then 4000 sample so we end up with 6 classes and 39999 samples as you can see on the diagram.

As for the libraries we used pandas, numpy, matplotlib, seaborn, and sklearn.



Check the data by scanning the QR code

RESULTS

	precision	recall	f1-score	support
Acne	0.95	0.96	0.96	1117
Anxiety	0.84	0.82	0.83	1181
Bipolar Disorde	0.88	0.86	0.87	845
Birth Control	0.97	0.95	0.96	1814
Depression	0.86	0.88	0.87	1814
Pain	0.92	0.95	0.93	1229
accuracy			0.91	8000
macro avg	0.90	0.90	0.90	8000
weighted avg	0.91	0.91	0.91	8000

The model is building by using many classifiers. The best accuracy was by using Feature Extraction (N-grams) 90.62%