**Mansoura University**



**Faculty of Computers and Information**

**Department of Computer Science**

**Project Proposal**

# Arabic Title

# مرض السكر

### 

##### English Title

### **diabetes**

### **Submitted by:**

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| --- | --- | --- |
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Project Abstract:

Diabetes Mellitus (DM) is a condition induced by unregulated diabetes that may lead to multi-organ failure in patients.

Thanks to advances in machine learning and artificial intelligence, which enables the early detection and diagnosis of DM through an automated process which is more advantageous than a manual diagnosis.

Project Objectives:

build a machine learning model to accurately predict whether or not the patients in the dataset have diabetes or not

Who are the project **competitive**? and how will your project be **different**?

In 20016: Prediction of G protein-coupled receptors with SVM-Prot features and random forest.

In 2018:Classification of small GTPases with hybrid protein features and advanced machine learning techniques.

Our Project will be Differnet by : Using “Machine Learning” in Detecting diabets in its early stages so that doctors can treat it. Also how it`s related to heart problems and its effect.

Tools, Hardware and Software Resources:

**Tools :-**

* Kaggle (for datasets)
* Python libraries like (pandas, numpy, pickle, sklearn, keras and more to add according to the project.
* Decision Tree
* Random Forest
* Neural Network
* Model Validation
* And more to add according to the project

**Software:-**

Anaconda(Jupyter) for working with data visually, Visual studio(web app + flask or fastapi), Phpstorm and pycharm

**Hardware:-**

SCHEDULING PHASES:

|  |  |  |
| --- | --- | --- |
| **From** | **To** | **Activity** |
| **8/3** | **16/3** | research |
| **17/3** | **26/3** | **Basics of the project** |
| **27/3** | **3/4** | **Code writing** |
| **4/4** | **15/4** | Design website(front end) |
| **16/4** | **28/4** | Working on back end |
| **30/4** | **2/5** | Finishing project |

References:

[**https://www.hindawi.com/journals/jdr/2020/4981814/**](https://www.hindawi.com/journals/jdr/2020/4981814/)

[**https://www.sciencedirect.com/science/article/pii/S1877050920300557**](https://www.sciencedirect.com/science/article/pii/S1877050920300557)

<https://www.idf.org/aboutdiabetes/type-2-diabetes.html>