**GLOBAL ACADEMY OF TECHNOLOGY**

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING** (Accredited by NBA 2019-2022)

**Rajarajeshwari Nagar, Bengaluru – 560 098**

**Academic Year: 2019 - 20**

**PROJECT SYNOPSIS**

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| --- | --- | --- | --- | --- |
| **Subject Name** | **Project Work** | **Subject Code** | | **15CSP78** |
| **Student Name** | PRAVEEN V | **USN** | | 1GA16CS101 |
| YASHAS C R | 1GA16CS182 |
| SNEHA SURENDRA | 1GA16CS198 |
| THEJASVEE M | 1GA16CS195 |
| **Domain** | DEEP LEARNING | **Group No:** | 53 | |
| **Project Title** | “EXPERT SYSTEM ON DIFFERENTIAL DIAGNOSIS USING DEEP LEARNING” | | | |
| **Undertaken at** | GLOBAL ACADEMY OF TECHNOLOGY | | | |
| **Guide Name** | JYOTHI R | | | |

**ABSTRACT:**

Differential diagnosis is a process of differentiating two or more condition which shares similar signs or symptoms.  This is based on a knowledge of the pathophysiology of the presenting signs and symptoms, and the natural history of various diseases and their causative agents. This process becomes cumbersome when the symptoms and the patient's history is complex. The challenges faced in the differential diagnosis are diagnosing the disease of the patient’s golden time and also keeping in account the vast knowledge of the symptoms.

Considering the above challenges in differential diagnosis we try to overcome them using machine learning. We create a knowledge base required for diagnosing the diseases and collect the patient’s data such as symptoms, history and map it to the most possible diseases. Thus helps in diagnosing faster and narrows down the focus area.

**OBJECTIVES:**

* To set up an environment that records the patient’s history and symptoms and analyses the condition.
* To enhance the analysis and assumptions by feeding the model with more knowledge and narrow down the focus area.
* And finally, to predict the final list of possible diseases and the probability of those diseases occurring.

**INTRODUCTION ABOUT THE DOMAIN:**

* Deep learning is an artificial intelligence function that imitates the workings of the human brain in processing data and creating patterns for use in decision making.
* In this project, we make use of deep learning for imitating experts in diagnosing procedures and making decisions.
* The neural network helps in understanding the underlying relationships among the symptoms and map it to the most probable diseases.

**REQUIREMENT SPECIFICATION:**

**Minimum Hardware Requirement specification**:

Processor: Intel i7-8750H CPU @ 2.20GHz

RAM: 8.00 GB

Hard Disk: 1 Tb

**Minimum Software Requirement Specification**:

Operating system: Windows 10

Softwares: Anaconda, Jupyter Notebook, Tensor flow, Keras.

**Signature of Students Signature of Guide**