Table 5 presents the hardware specifications required for the simulation. Python programming language provides many built-in libraries we used it to implement the proposed algorithm and the GA algorithms to be justice when compare between them and used sklearn library in python. Scikit-learn is perhaps the most helpful Python machine learning package. The sklearn library includes several effective tools for machine learning and statistical modeling, including classification, regression, clustering, and dimensionality reduction.

Table 5

|  |  |
| --- | --- |
| **Hardware** | **Description** |
| Processor | Intel(R) Core (TM) i7-6700HQ CPU @ 2.60GHz |
| Memory (RAM) | 16.0 GB |
| Hard Disk Storage | 2 terabytes |
| Cache Memory | 6 MB Cache |
| **Software** | **Description** |
| System type | 64-bit Operating System |
| Operating System | Windows 10 |
| Programming language | Python |
| Environment | Anaconda |
| IDE | Pycharm |

|  |  |  |
| --- | --- | --- |
| **Pima** | **Algorithm** | **Selected Features** |
| CFA | Glucose, Skin thickness, BMI, and Insulin |
| GA | Glucose, BMI, Diabetes pedigree function, and Age |
| **HFD** | CFA | Diabetes pedigree function, Age, Glucose and BMI |
| GA | Pregnancies, Glucose, Insulin and Age |