

# SOFTWARE/HARDWARE LIST:-

Chapter Name	Chapter number	Software required (With version)	Hardware specifications	OS required
Introduction to Artificial Intelligence	1	<ul style="list-style-type: none"> <li>None</li> </ul>	64 bit architecture, 2 GHz CPU, 4GB RAM, at least 2GB of hard disk space available	Windows, Mac, or Linux
Classification and regression using supervised learning	2	<ul style="list-style-type: none"> <li>Scikit-learn 0.17.0</li> <li>Numpy 1.1</li> <li>Matplotlib 1.5.1</li> </ul>	64 bit architecture, 2 GHz CPU, 4GB RAM, at least 2GB of hard disk space available	Windows, Mac, or Linux
Predictive analytics with ensemble learning	3	<ul style="list-style-type: none"> <li>Scikit-learn 0.17.0</li> <li>Numpy 1.1</li> <li>Matplotlib 1.5.1</li> </ul>	64 bit architecture, 2 GHz CPU, 4GB RAM, at least 2GB of hard disk space available	Windows, Mac, or Linux
Detecting patterns with unsupervised learning	4	<ul style="list-style-type: none"> <li>Scikit-learn 0.17.0</li> <li>Numpy 1.1</li> <li>Matplotlib 1.5.1</li> </ul>	64 bit architecture, 2 GHz CPU, 4GB RAM, at least 2GB of hard disk space available	Windows, Mac, or Linux
Building recommender systems	5	<ul style="list-style-type: none"> <li>Scikit-learn 0.17.0</li> <li>Numpy 1.1</li> <li>Matplotlib 1.5.1</li> </ul>	64 bit architecture, 2 GHz CPU, 4GB RAM, at least 2GB of hard disk space available	Windows, Mac, or Linux
Logic programming	6	<ul style="list-style-type: none"> <li>Scikit-learn 0.17.0</li> <li>Numpy 1.1</li> <li>Matplotlib 1.5.1</li> <li>LogPy 1.0.1</li> <li>SymPy 1.0</li> </ul>	64 bit architecture, 2 GHz CPU, 4GB RAM, at least 2GB of hard disk space available	Windows, Mac, or Linux
Heuristic search techniques	7	<ul style="list-style-type: none"> <li>simpleai 0.8</li> </ul>	64 bit architecture, 2 GHz CPU, 4GB RAM, at least 2GB of hard disk space available	Windows, Mac, or Linux
Genetic algorithms	8	<ul style="list-style-type: none"> <li>Scikit-learn 0.17.0</li> <li>Numpy 1.1</li> <li>Matplotlib 1.5.1</li> <li>DEAP 1.0.2</li> </ul>	64 bit architecture, 2 GHz CPU, 4GB RAM, at least 2GB of hard disk space available	Windows, Mac, or Linux
Building games with Artificial Intelligence	9	<ul style="list-style-type: none"> <li>Numpy 1.1</li> <li>easyAI 0.0.0.1</li> </ul>	64 bit architecture, 2 GHz CPU, 4GB RAM, at least 2GB of hard disk space available	Windows, Mac, or Linux
Natural Language Processing	10	<ul style="list-style-type: none"> <li>Scikit-learn 0.17.0</li> <li>Numpy 1.1</li> <li>NLTK 3.0</li> <li>gensim 0.13.3</li> </ul>	64 bit architecture, 2 GHz CPU, 4GB RAM, at least 2GB of hard disk space available	Windows, Mac, or Linux

Probabilistic reasoning for sequential data	11	<ul style="list-style-type: none"> <li>• Numpy 1.1</li> <li>• Matplotlib 1.5.1</li> <li>• Pandas 0.19.1</li> <li>• hmmlearn 0.2.1</li> <li>• PyStruct 0.2.4</li> <li>• cvxopt 1.1.9</li> </ul>	64 bit architecture, 2 GHz CPU, 4GB RAM, at least 2GB of hard disk space available	Windows, Mac, or Linux
Speech recognition	12	<ul style="list-style-type: none"> <li>• Numpy 1.1</li> <li>• Matplotlib 1.5.1</li> <li>• Scipy 0.17.0</li> <li>• python_speech_features 0.4</li> <li>• hmmlearn 0.2.1</li> </ul>	64 bit architecture, 2 GHz CPU, 4GB RAM, at least 2GB of hard disk space available	Windows, Mac, or Linux
Object detection and tracking	13	<ul style="list-style-type: none"> <li>• OpenCV 3.1</li> <li>• Numpy 1.1</li> </ul>	64 bit architecture, 2 GHz CPU, 4GB RAM, at least 2GB of hard disk space available	Windows, Mac, or Linux
Artificial neural networks	14	<ul style="list-style-type: none"> <li>• OpenCV 3.1</li> <li>• Numpy 1.1</li> <li>• Matplotlib 1.5.1</li> <li>• Neurolab 0.3.5</li> </ul>	64 bit architecture, 2 GHz CPU, 4GB RAM, at least 2GB of hard disk space available	Windows, Mac, or Linux
Reinforcement learning	15	<ul style="list-style-type: none"> <li>• OpenAI Gym 0.5.7</li> </ul>	64 bit architecture, 2 GHz CPU, 4GB RAM, at least 2GB of hard disk space available	Windows, Mac, or Linux
Deep learning with convolutional neural networks	16	<ul style="list-style-type: none"> <li>• Tensorflow 0.11.0</li> <li>• Numpy 1.1</li> <li>• Matplotlib 1.5.1</li> </ul>	64 bit architecture, 2 GHz CPU, 4GB RAM, at least 2GB of hard disk space available	Windows, Mac, or Linux