**Natural language processing python**

Since computers can’t understand language as humans do, they need a solution to interpret what we mean. Natural language processing is an artificial intelligence-based algorithm that helps machines understand, interpret and manipulate human language. This is one of the most innovative, ground-breaking and rapidly evolving field of the 21st century.

Natural language processing is being used in almost all of the customer service companies to understand customer behaviour and handle general consumer queries more efficiently. NLP also helps in streamline business operations, increasing productivity and maximise resource utilisation just to name a few of its advantages.

**Why NLP?**

The growth of technological industries as a whole have placed an increasing demand in communication speed and bridging the gap between the linguistics of man and machine. NLP as projected, will pave the way for the evolution of intelligent customer service platforms, virtual assistants, efficient speech recognition technology and more.

The main challenge for NLP is that human language itself is abstract. To understand the semantics of a conversation or a string of text is where machines struggle. When we do translations, if the machine fails to correctly grasp the logical idea of the words in one language, it will fail to correctly translate the data into the other language.

**How does Natural Language Processing work?**

NLP starts by deconstructing language into separate pieces so that the entire string of text can understood in context. This step is really important and is called pre-processing

Some of the few important tasks required in pre-processing are

* Tokenization

Breaking down the whole sentence into smaller semantic units

* Part of speech tagging

Marking the words in the clusters as verbs, adjectives, nouns, pronouns etc.

* Stemming and lemmatization

Process of standardising the words so that the machine can understand them easily

* Stop word removal

Removing insignificant and most common words that provide no value to the information we have at hand.

If we do not responsibly pre-process the data, The output we’ll be getting would also have no quality, since the input data was improper.

**What are the Tools used for Natural Language Processing?**

Natural Language Toolkit (NLTK) is the most commonly used NLP tool based on python. It is an open-source software developed for research and education purposes. NLTK provides basic set of tools which are useful for beginners to do text related operations

In this course we’ll be covering everything there is to know about NLTK. Its use cases, functions, working get familiar with the tools and more.

**What is the scope of NLP?**

The job opportunities of NLP engineers/scientists are one of the 7 most in demand as of now. NLP has a promising future in sales, leadership, stress management, accelerated training, and coaching. Since it is a derivative of artificial intelligence, the need for this skill will continue to grow.

**What is the average salary of an NLP engineer?**

NLP Engineer salary in India with less than 1 year of experience to 10 years ranges from 3.4 Lakh Rs to 19.8 Lakh Rs with an average annual salary of 8.5 Lakhs

**What will you learn in this course?**

You will learn how to use NLTK for processing language data, do semantic analysis, speech tagging, cipher decryption and more