**IT Technologies – Assignment 2**

**Natural Language Processing**

**What is the likely impact?**

NLP (natural language processing) helps companies automate processes that would in turn can reduce costs or provide insight into improving business strategies. AnswerRocket, software that organizations could apply to their systems, allows staff members or users to access and view specific publicly available company data with search queries that would include natural language. The idea is to make information regarding the company more accessible for all people when they aren’t limited to data that can’t be accessed because they couldn’t word their search correctly. Furthermore, Parlamind is a system that uses NLP to analyse customer communications and automatically answer queries. Analysis of communication can grant businesses with necessary insight into what practices may be failing and why. Additionally, Netomi, another system which uses NLP, that automatically grants resolutions to everyday queries instantaneously of everyday support tickets. This effectively allows a company to increase their workforce without actively increasing their headcount, thus, reducing costs for the company and allows it to be managed more easily.

In contrast, NLP may threaten numerous jobs in multiple industries. Digital Genius, a system that utilizes ML, machine learning, and NLP, assesses common customer service interactions of different businesses to understand their client needs which serves as an example of how a job like a customer service agent may be threatened. For now, Digital Genius can help with queries but will refer to a customer service agent when one is required to handle the call; if software similar to Digital Genius were to advance further then customer service may become entirely handled by AI (artificial intelligence), thus, rendering customer service agents redundant. According to the World Economic Forum**\*1**, jobs that fall under the financial services profile**\*3**, on average, have a 20.8% share of workers at risk of displacement due to the advancements of technology which is the highest percentage share of workers at risk of displacement amongst all the industry profiles**\*2** mentioned in the text where the mining and metals profile**\*4** is second with a 19.9% average share of workers at risk of displacement. Customer service workers are categorized into the financial services profile making them, on average, threatened by technology the most when compared to others.

We are likely to see businesses able to implement solutions according to customer needs and client requirements as data can be gathered and analysed based on customer interactions with the company by utilizing ML and NLP. Although some people will lose their jobs, companies will theoretically be able to place more funds into research and development, quality assurance, production, and more factors that may make their goods and services more affordable and accessible.

**How will this affect you?**

NLP, natural language processing, can affect us in many different aspects of life whether it be for convenience or support – both emotionally and physically. NLP allows for users to translate text from or to any language they desire which has numerous applications. Users may find themselves looking into taking a holiday to a foreign country to experience something new; where in the past they may have been limited by a language barrier, we are now able to simply input some text whether it be through a keyboard or by speech recognition technology and be granted a result. The emotional well-being of a person can drastically affect their performance of tasks during the day.

Replika AI**\*5** is a chatbot that utilizes NLP to learn more about a user through mutual interaction and, their motto being, a friend who will be there for you, talk, listen, and without judgement 24X7. According to the World Health Organization**\*6**, depression is a common mental disorder that affects an estimated 5% of adults globally – where more women are affected by depression than men. Depression is a matter that needs to be taken seriously and Replika AI aims to contribute to fighting the effort to reduce and defeat depression. Replika is an accessible solution and according to Partap**\*7**, “85% of Replika users find it helpful to ease their anxiety and stress. Simply talking with the app has helped a plethora of users.”, which proves that it is an effective solution that utilizes NLP. Having the Replika chatbot be a free and accessible program for users globally means people have a greater chance in preventing themselves from succumbing to the effects of depression, as a result, may create a slightly more productive society.

**References**

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