

CONTENTS

- **What is telegrambot**
- **Explain about types of cancer and their prediction**
- **What is NLP (natural language processes) which NLP model is used in project**
- **Dataset**
- **How the project works**

WHAT IS TELEGRAMBOT

- The term “Bot” comes from “Robot”. It is a special type of user but a computer program that behaves like a chat partner with additional features like sending information, ordering, playing tunes and more.
- It perform predefined tasks on its own or with users’s involvement. Telegram bot sometimes takes data from its user to provide the best relevant response possible.
- A Telegram bot can basically do everything a human chat partner does. Automatically or on request, it can send you the following information:
 - Text messages
 - Images
 - Videos
 - Files of any other kind
- Telegram provides API to create bots and is completely free. Moreover, Telegram bots are very secure, which means every exchange of messages between the user and Telegram bot is end-to-end encrypted. By following the pair-to-pair security protocol, only the sender and the receiver can access those messages.



WHAT IS CANCER?

- In simple terms, cancer is an abnormal growth of body cells. Each one of us is born with a potential for cancer.
- One cannot "Catch" it as one would an infection or a cold.
- When the programming of a cell or a group of cells is affected, growth may become
- uncontrolled.
- Some of the factors that can alter the code are chronic irritation, tobacco, smoke and dust, radioactive substances, age, sex, race and heredity.
- While one cannot control many of these factors , we need to be aware of the ones we can
- control of. Prevention is definitely better than treatment of cancer.
- No one yet talks of cure, treatment:

TYPES OF CANCERS

There are mostly 19 types of cancers are there they are

- 1.Breast cancer**
 - 2.Cervical cancer**
 - 3.Oral cancer**
 - 4.Cancer of bladder(bladder cancer)**
 - 5.Cancer in the eye(eye cancer)**
 - 6.Colorectal cancer**
 - 7.Esophageal cancer**
 - 8.Kidney cancer**
 - 9.Laryngeal cancer**
 - 10.Liver cancer**
 - 11.Lung cancer**
 - 12.Postrata cancer**
 - 13skin cancer**
 - 14.Stomach cancer**
 - 15.Testicular cancer**
 - 16.Thyroid cancer**
 - 17.Uterine cancer**
 - 18.Ovarian cancer**
 - 19.Cncer in the pancreas(pancreas cancer)**
-
-

BREAST CANCER

- **Breast cancer occurs when some breast cells begin to grow abnormally. These cells divide**
- **more rapidly than healthy cells and continue to gather, forming a lump or mass. The cells**
- **may spread (metastasize) to the lymph nodes or other parts of the body. Breast cancer**
- **mostly begins with cells in the milk-producing ducts (invasive ductal carcinoma) or in the**
- **glandular tissue called lobules (invasive lobular carcinoma) or in other cells or tissue within**
- **the breast.**
- **Symptoms of breast cancer**
- **A lump in the breast or underarm (most common symptom)**
- **Change in the size, shape or appearance of the breast.**
- **An inverted nipple (newly developed)**
- **Peeling, scaling, crusting or flaking of the area of skin surrounding the nipple or**
- **breast skin.**
- **Redness or pitting of the skin over the breast (like the peel of an orange).**
- **Bloody or clear discharge from the nipple.**
- **Swelling, warmth, redness or darkening on the breast.**
- **Itchy, scaly sore or rash on the nipple**

SYMPTOMS OF BREAST CANCER

**A lump in the breast
or underarm (most
common symptom)**

**Change in the size,
shape or appearance
of the breast.**

**An inverted nipple
(newly developed)**

**Peeling, scaling,
crusting or flaking of
the area of skin
surrounding the
nipple or**

breast skin.

**Redness or pitting of
the skin over the
breast (like the peel
of an orange).**

**Bloody or clear
discharge from the
nipple.**

**Swelling, warmth,
redness or darkening
on the breast.**

**Itchy, scaly sore or
rash on the nipple**

CERVICAL CANCER

- **When cancer develops in the cervix of a female, it is termed as Cervical Cancer (CC).**
- **CC usually develops slowly over time with initial appearance of abnormal cells in the cervical tissue. Later, cancer cells start to grow and spread more deeply into the cervix and to surrounding areas.**

SYMPTOMS OF CERVICAL CANCER

- ✦ Irregular, inter-menstrual (between periods) bleeding.
- ✦ Abnormal vaginal bleeding after sexual intercourse and a pelvic examination
- or bleeding after menopause.
- ✦ Vaginal discomfort or odorous discharge from vagina, the discharge may
- contain some blood and may occur between periods or after menopause.
- ✦ Pain during sex
- ✦ Back, leg or pelvic pain.
- ✦ Fatigue, weight loss, loss of appetite.
- ✦ Swelling in one leg.

ORAL CANCER

- **The cancer appearing in any parts of oral cavity (like lips, tongue, cheeks,**
- **floor of the mouth, hard and soft palate, sinuses, and pharynx) is called**
- **as oral cancer.**

A decorative wavy line in orange and white, running vertically along the left side of the slide.

Symptoms of Oral Cancer

- ✦ Red or red and white, patches on the lining of mouth or tongue.
- ✦ Leukoplakia > 2cm in size.
- ✦ One or more mouth ulcers that do not heal after three weeks
- ✦ Swelling in mouth that lasts for more than three weeks
- ✦ Pain when swallowing (dysphagia)
- ✦ Difficulty chewing, swallowing, speaking or moving tongue.
- ✦ Difficulty in opening mouth, moving jaw, or swelling or pain in jaw.
- ✦ A persistent pain in the neck
- ✦ A hoarse voice
- ✦ Unexplained weight loss
- ✦ Unusual changes in sense of taste
- ✦ Difficulty in tolerating spicy foods
- ✦ Excessive salivation
- ✦ Pain in ear
- ✦ The lymph nodes (glands) in neck become swollen

CANCER OF THE BLADDER(BLADDER CANCER)

THIS IS A SLOW GROWING CANCER, AND RESPONDS WELL TO TREATMENT. TOBACCO AND CHRONIC IRRITATION ARE PRIME CAUSES. HOUSE PAINTERS, HAIR DRESSERS, TRUCK DRIVERS, TEXTILE WORKERS AND PRINTERS ARE AT A RISK DUE TO THE CHEMICALS THEY ARE CONSTANTLY IN TOUCH. BLOOD IN URINE AND PAINFUL PASSING OF URINE ARE SYMPTOMS TO BEWARE.

CANCER IN THE EYE (EYE CANCER)

IT CAN BE OF SEVERAL TYPES. INTENSE EXPOSURE TO U/V RAYS OF THE SUN MAY CAUSE IT. LIGHT EYED PERSONS ARE AT GREATER RISK OF MELANOMA.

CANCER OF PANCREAS (PANCREAS CANCER)

THERE IS NO KNOWN CURE FOR THIS CANCER. SYMPTOMS ARE ABDOMINAL PAIN, JAUNDICE, LOSS OF APPETITE OR WEIGHT LOSS. IT IS RECOMMENDED THAT YOU ABSTAIN FROM TOBACCO USE, FOLLOW A LOW FAT DIET, EAT FRUIT AND VEGETABLES, MODERATELY FRIED OR GRILLED FOODS. MARGARINE NOT BUTTER IS A SUSPECT

COLORECTAL CANCER

THIS IS LINKED TO HIGH FAT AND LOW FIBER DIET. IT IS A RICH MANS' DISEASE, AND PREVALENT IN THE RICHER COUNTRIES. DIARRHEA, PAIN IN THE ABDOMEN, LOWER BACK OR BLADDER, OR A CHANGE IN BOWEL HABITS ARE SYMPTOM OF CANCER.

ESOPHAGEAL CANCER

TOBACCO AND ALCOHOL PREDISPOSE YOU TO THIS CANCER. ALSO PICKLED FOODS AND TOO MUCH SPICE. SYMPTOMS ARE TROUBLE IN SWALLOWING, CHOKING, PAIN AND SPASMS IN THE THROAT. VITAMIN A AND C ARE RECOMMENDED AS RETARDANTS.

KIDNEY CANCER

IT AFFECTS MOST MEN THAN WOMEN. BLOOD IN THE URINE, BACKACHE, FULLNESS OR LUMPS IN THE UPPER ABDOMEN, LOSS OF APPETITE, ARE SIGNS OF RENAL CELL CANCER. RENAL PELVIC CANCERS AFFECT PEOPLE OVER AGE OF 60 YEARS. BATTERY MAKERS, ELECTROPLATERS, AND RUBBER WORKERS ARE AT PARTICULAR RISK. TOBACCO, CADMIUM, HIGH PROTEIN AND SACCHARINE ARE PRIME SUSPECTS.

LARYNGEAL CANCER

HOARSENESS AND DISCOMFORT IN THE THROAT ARE SYMPTOMS TO LOOK OUT FOR. TOBACCO, ALCOHOL, ASBESTOS AND NICKEL ARE SUSPECTED CAUSES.

LIVER CANCER

THEY MAY BE PRIMARY OR SECONDARY. SYMPTOMS ARE LOSS OF APPETITE, WEIGHT LOSS, ABDOMINAL SWELLING, PAIN, FEVER AND JAUNDICE. CIRRHOSIS IS CLOSELY LINKED WITH CANCER OF THE LIVER. AVOID ALCOHOL, VINYL CHLORIDE (PLASTICS), DRUG ABUSE, AFLATOXINS FROM FUNGUS ON PEANUTS.

LUNG CANCER

90% OF THESE CAN BE ATTRIBUTED TO SMOKING. WOMEN ARE CATCHING UP ON MEN SMOKERS. POLLUTION IN THE CITIES HAS INCREASED CHANCES LUNG CANCER.

TO COUNTER THE TOXICITY OF POLLUTION, INCREASE INTAKE OF GREEN LEAFY VEGETABLES AND YELLOW AND ORANGE FRUIT. SYMPTOMS MAY INCLUDE PERSISTENT COUGH, WEIGHT LOSS AND LOSS OF APPETITE.

OVARIAN CANCER

THEY AFFECT MOSTLY POST-MENOPAUSAL WOMEN. IT AFFECTS WOMEN WITH FEW OR NO CHILDREN, WITH A HISTORY OF MENSES PROBLEMS OR OTHER CANCERS. SYMPTOMS ARE CONSTIPATION, FLATULENCE, WATER RETENTION, A NEED TO URINATE, PAIN, SWELLING OR NAUSEA.

THYROID CANCER

THEY ARE COMMON IN WOMEN OF CHILD BEARING AGE. SURVIVORS OF NUCLEAR HOLOCAUSTS AT BIKINI ATOLL, NAGASAKI AND HIROSHIMA SUFFERED THESE CANCERS DUE TO EXPOSURE TO RADIATION.

PROSTATE CANCER

THE SILENT KILLER. MEN OVER 50 YEARS SHOULD INCLUDE PSA (PROSTATE SENSITIVE ANTIGEN) TEST IN THEIR ANNUAL MEDICAL ROUTINE.

SKIN CANCER

THEY ARE MORE COMMON IN WHITE SKINNED PEOPLE. PEOPLE WITH LIGHT EYES AND HAIR ARE AT RISK. LOOK OUT FOR MOLES THAT GROW DARK AND UNEVEN, ITCH OR CHANGE COLOR AND OUT LINE.

STOMACH CANCER

THEY ARE SLOW GROWING AND HARD TO TREAT. PEOPLE WITH BLOOD GROUP A AND WHO HAVE PERNICIOUS ANEMIA ARE AT RISK. EAT PLENTY OF RAW VEG- CRUCIFORM, OR DARK GREEN AND YELLOW VEGETABLES WITH VITAMIN A AND C ARE BEST. AVOID HIGHLY SALTED OR SMOKED OR PICKLED FOODS.

TESTICULAR CANCER

MEN WITH UNDESCENDED TESTICALS ARE AT RISK. ENLARGEMENT OF ONE TESTICLE, DRAGGING ACHE IN THE LOWER ABDOMEN ARE SIGNS TO BEWARE OF. REGULAR SELF EXAMINATION IS STRONGLY RECOMMENDED.

THYROID CANCER

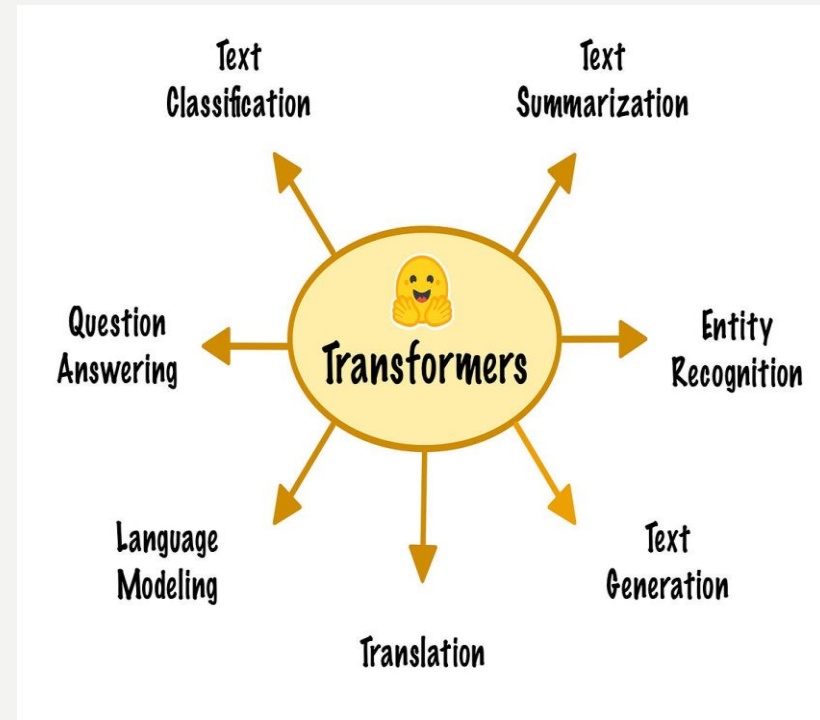
THEY ARE COMMON IN WOMEN OF CHILD BEARING AGE. SURVIVORS OF NUCLEAR HOLOCAUSTS AT BIKINI ATOLL, NAGASAKI AND HIROSHIMA SUFFERED THESE CANCERS DUE TO EXPOSURE TO RADIATION.

UTERINE CANCER

IT AFFECTS WOMEN OVER 50 YEARS. HORMONE TREATMENT, HIGH FAT DIETS, SMOKING AND DRINKING, OBESITY, DIABETES AND HIGH BP ARE RISK FACTORS. THE PAP SMEAR IS AGAIN AN EARLY WARNING TOOL

NLP(NATURAL LANGUAGE PROSSES)

- NLP models work by finding relationships between the constituent parts of language — for example, the letters, words, and sentences found in a text dataset. NLP architectures use various methods for data preprocessing, feature extraction, and modeling.
- There are various transformers in NLP like text classification , language modeling etc.,
- Among those transformers I used question and answer transformers in my project
- For fine-tuning I used gpt2(open source)



DATASET

- **For my project to create my dataset I used a excel sheet which consists of four columns with questions and answers and their content and title**
- **In this dataset it consists of information about cancers and types of cancers and their symptoms**
- **In the that I gave different questions like what is cancer, types of cancers etc.,**
- **And given with related answers content is cancer and tile is cancer prediction**

HOW THE PROJECT WORKS

- **1. First we have to set up a new bot in telegram**
- **2. We have to select one language(python) and framework**
- **3. Next we have to set up the development environment**
- **4. We have to develop the cancer bot**
- **5. And connect the bot to the telegram**
- **6. Finally test and deploy the model**