



GOVT. DEGREE COLLEGE, MEDAK

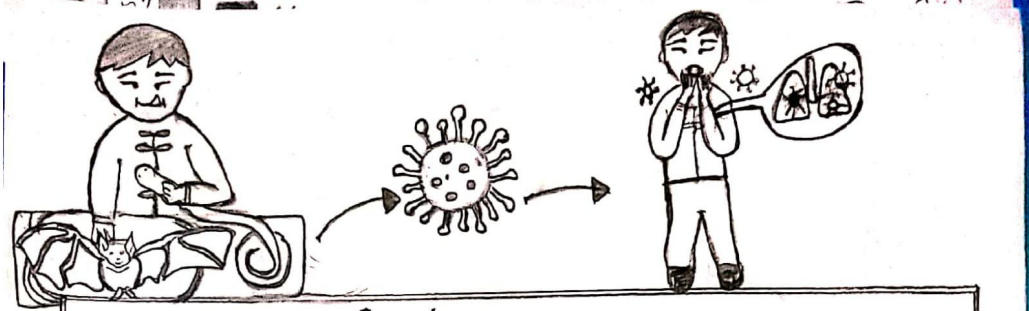
(ID-College)

Re-accredited with ' B ' Grade (CGPA-2.44) by NAAC

Principal: Dr.P.V.Narasimham, M.A., Ph.D.

ESBS - ACTION REPORT

Students were asked to write essays / poems / stories related to "Corona Virus" of their choice on 24.04.2020.



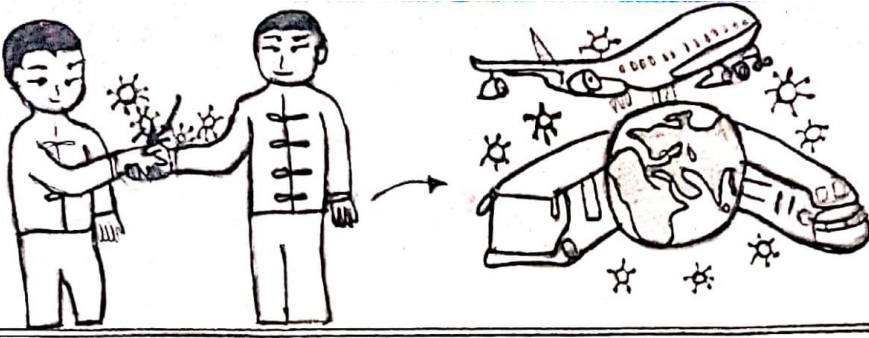
కవిత

సామాజిక దూరం, పరిశుభ్రతల యొక్క భాష/కవి

దేనికో హామిలేని దేశమే చైనా
అక్కడే పుట్టింది ఈ మహమ్మారి కరోనా
వాళ్ళ నిర్లక్ష్యం వల్ల వ్యాపించింది ప్రపంచం అంతట
కరోనాకే మందు లేదని పరిశోధకులు అల్లకల్లోలం అయ్యారు.

చైనాలోని ఈ కరోనా పుట్టింది నిమ్మదిగా తెలిసింది లోకంఅంతట
ప్రయాణాల వల్ల సాంఘిక దూరం లోపించిన
ఒకరి నుండి ఒకరికి సోకింది ఈ కరోనా
ఆస్పత్రుపాలయ్యేల చివరికి ఈ మహమ్మారి కరోనా.

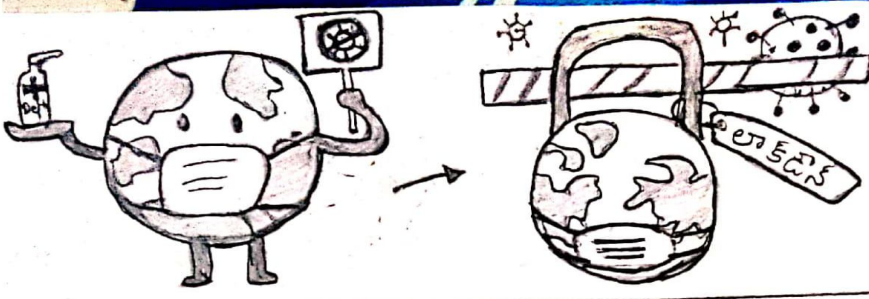
మన దేశం నుండి వేరే దేశానికి వలస వెళ్ళినవాళ్ళంతా
వాళ్ళ యాత్రాదేశాన్ని గుర్తుకుచేసింది ఈ కరోనా
సాంప్రదాయపు నమస్కారాన్ని మరిచిపోవడం కరోనానిచ్చింది గుణపాఠం
భారతదేశంలో పుట్టిన ఈ సాంప్రదాయాన్ని పాటించాలి ప్రపంచం మీదట.



ಅರಚುಗಾ ಹಾನ್ತಾಲನು ಪರಿಸರ ಪ್ರಾಂತಾಲಲಿ ಸುಭಂಚಿಸುಕುಂಟಿ
 ಸಾಮಾಜಿಕ ದುರಾಸಿ ಪಾಟಿಸ್ತೆ
 ಬಯತುಕಿ ವಿಳಿನಪ್ಪುದು ಮಾಸ್ಕುಲನು ಧರಿಸ್ತೆ
 ಕರೊನಾಕೆ ಕಟ್ಟಡೆ -ಚಿನಿವಿ ಈ ಮೂಡು ನೂಡಾಲಿ.

ಸೈಹಾಪುಲಾರಾ ಅಂದೊಳಿನೆಟು ಗುರಿಕಾಕಂಟೆ
 ಇಂಟ್ಲಾನಿ ಅನಂದಂಗಾ ತುಟುಂಬಂತೊ ಮಧುರಕ್ಷಣಾಲ್ಕಿ ಗರುಪಂಟೆ
 ರೆಯನಕ ಪಗಲನಕ ತಪ್ಪವಡುತುನು ದಾಕರ್ಲು ವೆಲಿಸುಲ ತ್ರಯೂ ಗುಣ್ತುಂಚಂಡೆ
 ದಯಾಚಿನಿ ಇಂಟ್ಲಾನಿ ಓಂಟು ವಾಚ್ಚೆವಿಪ್ಪಿಡಿ ಪಾಚಿನ್ತೂ ಕರೊನಾ ಕಟ್ಟಡೆ ಚಿಯಂಡೆ.

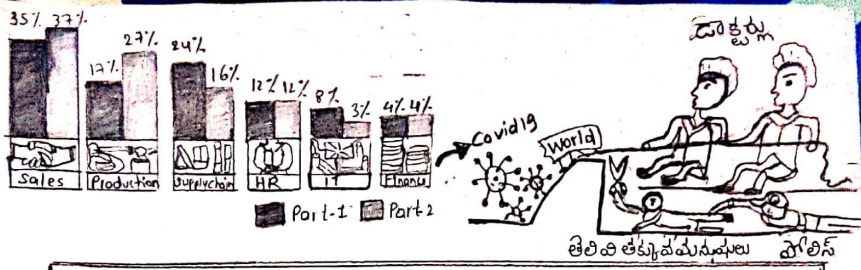
ಮಿತ್ರಲ್ಲಾರಾ ಮಾಂಸಹೆರಾಳಿ ಅಂತಿ ಕರೊನಾ ವಸ್ತುಂಚನಿ ಪುಕಾರ್ಲು ಸ್ಪಷ್ಟಿಂಚಕಂಡೆ
 ರೊಗೊರೊಧಕ ಕತ್ತೂ ಪೆಂಚಿ ಅಹಾರಾಳಿ ಸೈಕತುಂಚಂಡೆ.
 ಮಾಗಬೆವುಲಯಿನ ಕೊಳ್ಳೆನು ಪಾತೆಸಿ ಪಾಪಂ -ಚಿಯಕಂಡೆ
 ಮನಲಾಗಿ ಯಾಟಿಕೆ ಕೂಡಾ ಈ ಪ್ರಪಂಚಂಲೊ -ಚಿಯುಂಟಿ.



జనసమూహం ఎక్కువ ఉండటం వల్ల కరోనా నొక్కుతుందని
 యన ప్రధానమంత్రి అమెలతో తిచ్చారు లాక్‌డౌన్‌ను
 మిక్కుతూ అభిమానికే బిగ్ బాస్ టైటిల్ గెలవాలని వోట్లు వేసాడుగా
 అటువంటిది బిగ్ బాస్ హౌస్ లాంటి లాక్‌డౌన్‌ను మీ ప్రాణాలకోసం ఇంట్లోనే
 గడుపాలిం.

లాక్‌డౌన్ వల్ల ప్రభుత్వం విద్యాలయాలుకు సెలవులు ఇచ్చింది
 కనుక మీ చదువులు ఆగిపోతూ ఉండని ఆన్‌లైన్ పాఠాలు నొప్పుతుంది
 ఇంట్లోనే ఆన్‌లైన్ విద్యలో మీ చదువును కొనసాగించండి
 ఇలాంటి కఠిన సమయంలో కూడా నిపుణులకుంటే ఆన్‌లైన్ విద్యను సఫలం
 చేసేం.

లాక్‌డౌన్ వల్ల అర్థిక ప్రాప్తి బాగా దిబ్బితిన్నది
 ప్రధాన సంస్థలన్నీ యాతపడుతున్నాయి
 షాపింగ్ యాప్లను, సీనియర్ హాల్లను అన్ని రాష్ట్రాల్లో యూసుకపోయాయి
 దేవాలయాలను కూడా యూసుకోవారు అద్దం -చెసుకోండి మనం ఏంత
 క్రిక పరిస్థితిలో ఉన్నామని.



ఎన్నో ఎన్నోనోటి వైరస్‌ను, హెచ్‌ఐ‌వి‌ను, కెంపున్‌ను
 స్వైన్‌ఫ్లూను ఎన్నో మరెన్నో వ్యాధులను తరిమికొట్టాము.
 మనం ఇన్ని వ్యాధులను ఎదుర్కొని వచ్చాముగా
 అటువంటిది ఈ ఒక్క మహమ్మారిని ఎదుర్కోలేము.
 స్నేహితుల్లారా చింతించకండి కరోనాను తరిమికొట్టడానికి ప్రభుత్వం ముందుకొస్తోంది
 - కొన్నూ

అప్పటివరకు శుభ్రతను, భవితాకర్మలను పాటస్తూ
 మేండు రాగానై కరోనాని తరిమి తరిమి కొడుతూ
 అందరం వికమయ్యి మన ఇవారతీయ సత్తాని చూపుతూ.

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ROLE OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCES FOR FIGHT AGAINST COVID-19

INTRODUCTION :-

Artificial Intelligence refer to the stimulation of human intelligence in machines that are programmed to think like humans and mimic their actions. The AI may also be applied to any machine that exhibits traits associated with a human mind such as learning and problem solving.

The ideal characteristic of artificial intelligence is its ability to rationalize and take actions that have best chance of achieving specific goal.

How Artificial Intelligence is helping in fight against COVID-19 pandemic :-

Using china as a case study, china success with using artificial intelligence as a crisis management tool and demonstrated its utility. Advancement in artificial intelligence such as Natural language processing, speech recognition, Data analytics, Machine learning, Deep learning and other such as Chatbots and Facial recognition have not only been utilized for diagnosis but also for contact tracing and vaccine development. AI has no doubt aided the control of the COVID-19 pandemic and help to curb its worst effects.

Artificial Intelligence has been deployed in several ways so far, and following are ways in which AI has been applied as measure to solve the problems of pandemic (COVID-19).

(1) Disease Surveillance Artificial Intelligence :-

With infectious disease like COVID-19 surveillance is crucial. Human migration has been responsible for the spread of virus all around world.

So, essentially AI can find pattern in these data source and can help provide insights into emerging infectious disease like the dominant COVID-19. The biggest platform that are currently tracking COVID-19 are

- * John Hopkins Dashboard - which monitor confirmed cases vs ^{-red.} recover
- * Next strain - which track how the virus spread and most prominent is
- * BlueDot - whom predicts infectious diseases among other. Focusing particularly on BlueDot. They are an AI based startup who built intelligent system about people to determine the likelihood of occurrence of any disease. BlueDot predicted the SARS outbreak which turned into true. They also use Natural language processing (NLP), a tool to track disease from across globe analysing different human languages use the information through them with algorithms Technology. GIS Technology - Geographic Information System is one important tool used in recognize and stopping spread of COVID-19. This system has a data analytics Dashboard that's all the cases studies of COVID-19 across the world. In accordance with situation, preventive measures can be drawn with above AI based analytics to track the spread of disease and stopping COVID-19, Kaggle have just announced that, they have publish COVID-19 open Reserch Dataset (CORD-19). CORD-19 is resource of over 29,000 scholarly articles, including over 13,000 with full text research about COVID-19 and SARS COV-2 and related corona viruses. So, check that out if you would like to help out.

2. VIRTUAL HEALTHCARE ASSISTANTS (CHATBOTS) :-

The no. of COVID-19 cases has shown that health care system and response measures can be overwhelmed. Canada based Stallion, AI has leveraged its Natural language processing capabilities to build a Multi-lingual virtual health care agent

that can answer questions related to Covid-19, provide reliable information, clear guidelines, recommended protection measures, check and monitor the symptoms and advise individual whether they need self isolation or hospital screening.

3. DIAGNOSTIC AI :- (Artificial Intelligence)

Immediate diagnosis means that response measures such as quarantine can be employed quickly to curb further spread of infection. Tencent Deep learning-based AI model for detecting novel coronavirus pneumonia on high resolution computed Tomography also known as CT Scans. We are early mentioned that about the CT Scans, which are still most efficient way for detecting and evaluating the severity of pneumonia. AI assisted diagnosis could greatly reduce Radiologist work load by providing * Early diagnosis, * Early isolation, * Reduced virus spreading.

There is a dataset that has over 4600 CT scan images from 106 patients, over 26000 from Covid-19 patients and over 20,000 images from 55 control groups. They use Neural Network called UNet++. So, per patient it had an accuracy of 95.24% and per image 98.85%. While this is good. It is used to assist the radiologist and for quicker diagnosis. InterVision and Alibaba are both using computer vision on CT Scans images for corona disease diagnosis.

Alibaba has also come up with an AI system that capable of detecting corona virus in minimal time with accuracy of 96%. For this system, which trained in 5000 confirmed test data. Reports says at least 100 healthcare sector departments will be employing Alibaba AI system.

According to Nikkei's Asian Review, Alibaba AI system claim it only takes 20 seconds time to detect COVID-19. Reports says, doctors take 15 minutes to diagnosis the illness, there can be upward of 300 images evaluate.

Linking Med, released china's first open source Artificial intelligence model for pneumonia CT scan images analysis. Owned by Baidu's open source deep learning platform, paddle paddle. Linking Med has developed an AI powered pneumonia screening and lesion detecting system. The system can pinpoint the disease in less than one minute, with detection accuracy of 92% and recall rate of 97% of test data sets.

pyImage Search posted his blog how you can use X-ray image for detection covid-19 with using KerasTensorFlow and Deep learning. So, what we conclude from this that if think infected, it's best to go for a CT Scan and AI speed up the process, thus, alleviating the stress on Doctors.

4) FACIAL RECOGNITION AND FEVER DETECTORS:-

Artificial Intelligence thermal Cameras have been used for sometimes. Now, for detecting people with fever. The drawback to the technology is need for human operator. Now, however cameras possessing AI based, multisensory technology have been deployed in airports, hospitals, nursing homes, etc. The Artificial Intelligence technology automatically detect the individual with fever and track movement recognise their faces and whether person wearing a face mask or not. Infrared cameras used to detect the fever like symptoms.

5. INTELLIGENT DRONES & ROBOTS

The public deployment of drones and robots has accelerated due to the strict social distancing measures required to contain virus spread. Several Chinese companies develop solution to fight the deadly spread of virus. The Chinese government is using robots along with AI to scan surroundings and disinfectants in hospitals. The Thor-1 robot looks like an artillery drone but his ammunition is disinfected liquid at airports, Metro stations and crowded places.

They are also patrolling robots and drones that use infrared cameras as a fever screening system. If the detected person-temperature, is above normal, once identified, the drone alert ground staff to take measure to disperse the congregation. Robots also using to deliver food and medicine to avoid human contact.

Shenzhen-based pudu technology, who have installed it robots for cattering in more than 40 hospitals in china. For this purpose another shijiang based company called "Microbe MultiCopter", has supplies drones in order to transport medical samples and conduct thermal imaging for identifying human congregation much more efficiently. For the disease control, of covid-19 is to quarantine infected people and promote social distancing is used in robots and drones that assist with partolling, screening, compliance and carry out non-contact tasks, vaccine and treatment. To ensure compliance, some drones are used to track individuals not using face mask in public.

6) CURATIVE RESEARCH AI is part of what has troubled. The scientific community is absence of a definitive cure for the virus. Artificial Intelligence can potentially be a game changer for many companies. Exscientia CEO of prof. Andrew Hopik says that that AI can be used in three ways in current crisis.

- * One to develop antibodies and vaccines for Covid-19
- * Scan through existing drug to see any repurposed
- * Design drug of fight both the current and future Corona outbreak.

AI could achieve the appeal of AI design drug is relatively straightforward. There are literally tons of possible molecules can useful in medication. Artificial Intelligence a Computer System can stimulate the wide variety of molecules comparing them against different parameters and synthesizing the most promising compounds faster than human could. If quantum computers are capable enough, then cures and vaccine could arrive quicker. Even before a virus can become a pandemic.

Exscientia became the first company to put on AI design drug molecule to human trials earlier this year. Insilicon medicine is biotech start up focused on disease prevention. There are an analytics and AI centric company that are currently working on developing a solution that will help the doctors about the fighter molecule capable of inhibiting the Covid-19.

Dr. ZhanVoronkov from Insilico, says that they use GANs or Generative Adversarial Network to create molecules that binds to proteins. He further states that, "over the course of four days, his company's AI algorithms created 10,000 unique molecules which were narrowed down 100 and from those 100 scientists choose seven of those to synthesize. Reinforcement learning is then used to improve its conclusion and prediction through feedback loop by guiding molecules to specific objectives. As report by Wall Street Journal. Other biotech companies that are using Artificial Intelligence on molecular level offer biotechnology, like Xtalpi and AtomWise Inc.

Michigan state university is using Machine learning for New drug candidates for possible treatment of Covid-19. They started (cor) stated that Sequence identity of Covid-19 is 96% to SARS Cov. They also mentioned that they are in process of analysing the effective of "anti-retro viral medication". Google DeepMind known mostly for its algorithms that beat human players at Go, DOTA, STARcraft and other games, has been working directly on solution for drug discovery. Their secret weapon is AlphaFold, which is deep learning system that tries to predict protein structure accurately when no such protein exist.

"Gilead sciences" in collaboration with Beijing hospitals, has already started phase III, human testing of an experimental antiviral drug called "remdesivir" in Wuhan.

Global health authorities deem it is most possible treatment for people who severely ill with Novel-Covid-19.

7. INFORMATION VERIFICATION AI :-

The uncertainty of pandemic has unavoidably resulted in the propagation of myths on the social media platform. While no quantitative assessment has been done to evaluate how much misinformation is there already, it is certainly significant figure. The technology giants like Google, Facebook are battling to combat the wave conspiracy theories, phishing misinformation and malware. It is relayed by using AI technology. YouTube on the other hand, directly links users to the WHO and similar credible organisation for information. Videos that misinform are scoured from and taken down as soon as uploaded. We will for the well-being of you and your family, please follow only credible sources like World health organisation, the NHS and trusted organisation as well as public health agencies.

CONCLUSION :-

Novel Corona virus (Covid-19) originated in China at Wuhan city in December 2019. According to World health organisation Report, 3,916,337 people infected by Covid-19, in those people 1,343,054 people are recovered from Covid-19 and cause 270,711 deaths in all around the world in span of five months from January 2020 to till date. World health organisation announced the Covid-19 has pandemic in March 11, 2020. Symptoms of these virus are Fever, Headache, tiredness, rapid heartbeat, Shortness in breathing, cough, cold, chest pain and etc., according World health organisation.

Due to COVID-19 Global economy is slowdown, could be hit by its worst growth rate since 2009. In short span of time COVID-19 emerge as one of the biggest challenges to face 21st Century world. We considered the COVID-19 is a type of world war in current situation.

Artificial Intelligence plays crucial role in the fight against COVID-19. Artificial Intelligence is key to solve the problems of COVID-19. With using AI, we can stop the spreading of COVID-19 and detect the COVID-19 in short time. In future also, we can control the these types of pandemics, with using Artificial Intelligence. The use of AI for the prevention of new crisis should not be travelised.

I hope all are stay safe, during this period, hope fully it will pass soon, and we can go back to normal ways of life. Make sure to wash your thoroughly and practice social distancing.

"Stay Safe, Stay Home".