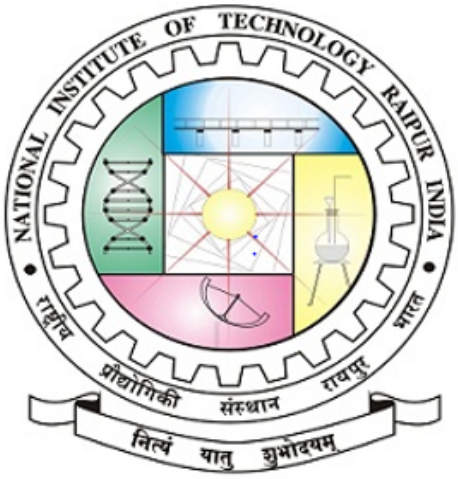
NATIONAL INSTITUTE OF TECHNOLOGY
RAIPUR



ASSIGNMENT

5 Solutions by Biomedical Engineers to Covid -19

Submitted By:
Name : Smriti Priya
Roll No. : 21111060
Semester : First
Branch - Biomedical Engineering

Under The Supervision Of:
Dr.Saurabh Gupta
Department Of Biomedical Engineering
NIT Raipur

Role Of Biomedical Engineers

Due of the unique obstacles described by epidemiologists, immunologists, and medical practitioners, such as survival, symptoms, protein surface composition, and infection pathways, biomedical science and engineering have been proposed as promising areas to serve medical science in combating SARS-CoV-2.

Tracking and Testing

When covid-19 pandemic ocured we needed as many testing kits as possible to tackle the virus.It includes rapid tests which took short time to declare the results as compared to pcr tests.
Because of the risk of infection and quick transmission, the development of software and technical applications, such as telemedicine to watch the virus's evolution in the population, has gotten a lot of interest.

Many testing kits were developed by the engineers.
Like :

- Smart iot covid-19 automator test booth hello for paperless and registration and online sample linking.

Diagnosis , Treatment and Prevention

A variety of medical equipment and devices are required for the diagnosis and treatment of Covid-19 disease, and the success of the pandemic response is linked to the availability of these medical equipment and gadgets.

Personal Protective Equipment (PPE) such as respirators, surgical masks, gowns, gloves, and face shields, Diagnostic tests and test devices, Intensive Care Unit equipment such as beds and ventilators, and Medical Diagnostic Devices such as Computed Tomography (CT) and Ultrasound

Devices can all be referred to as needed medical devices and equipment for fighting Covid-19.

Artificial Intelligence Applications in COVID-19 Pandemic

Artificial intelligence-based solutions assist healthcare organisations in coping with and combating viruses. It could be used to predict forthcoming pandemics or epidemics at an early stage, before they spread. It is feasible to anticipate and track patients by studying data. It could also be used to create and test novel vaccinations, as well as gain a better knowledge of despises.

- Early detection and diagnosis of the infection
- Monitoring the treatment and the global cases distribution
- AI is used for drug delivery design and development for vaccines

Vaccine Development

As bioengineered products and procedures are being investigated in practically every discipline of biomedical sciences, various lessons from domains like as cancer therapy and medication delivery can be applied to the development of better vaccine manufacturing technologies for respiratory disorders.

Mental Health

People are expected to quarantine and self-isolate, closing themselves off socially, as the number of mental health concerns rises amid the Covid-19 health crisis.
For overcoming this many apps were developed like covid coach .
Even many people were using AR and VR for their entertainment purpose. Doing exercise and yoga to keep themselves fit and while doing this the smart watch records all their biological activities for tracking their health.