UPES, Russian Experts unleash AI & Machine Learning for Bio-Diesel Production

By OUR STAFF REPORTER

DEHRADUN, 25 Oct: Three UPES researchers, in collaboration with bioenergy experts from Russia, have devised an advanced technique to enhance the biodiesel production process from Jatropha (Ratanjot). With an aim to find holistic solutions to pressing global challenges, the research harnesses the power of Artificial Intelligence (AI) and Machine Learning (ML) which will reduce labour expenses and enhance the quality of biofuel.

Abhirup Khanna from UPES School of Computer Science, Dr Sapna Jain, and Dr Bhawna Lamba from UPES School of Advanced Engineering, developed a methodology that utilises AI and machine learning algorithms to predict biodiesel properties and improve the yield and quality of biodiesel.

UPES and other global institutions, such as Don State Technical University and the Federal Scientific Agroengineering Center VIM in Russia have garnered notable recognition for this groundbreaking interdisciplinary research in sustainable energy solutions. With Jatropha (Ratanjot) being the prime inedible oilseed for biodiesel, the research focuses on enhancing the fuel's quality, facilitating precision in predicting fuel quantity, and lowering labour costs.

Recently, during the annual G-20 summit in New Delhi, an India-led group came together to form the Global Biofuels Alliance (GBA). GBA's mission is to unite countries to co-develop sustainable alternatives and encourage the use of biofuels.