

## Reducing environmental woes with Nissim's journey to Caltech

■ RAMANDEEP KAUR | NT KURIOCITY

Nissim Gore-Datar, an undergraduate student at BITS Goa who has completed the fourth year of his five-year dual-degree course (BE Mechanical Engineering + MSc Biological Sciences) is selected for the Summer Undergraduate Research Fellowship (SURF) at Caltech (California Institute of Technology, which will start from June 19.



He is also pursuing a minor in Philosophy, Economics and Politics (PPE) along with a double major. A native of Mumbai, Nissim has long been interested in the environment and sustainability, and was keen on specialising in environmental engineering. Hence, when he got admission to BITS Goa in biological sciences he took it up with the intention of supplementing it with a mechanical engineering degree, which he took up after my first year.

Talking of how he got selected for this internship, Nissim says: "I had written to professor Michael Hoffmann of Caltech with the reference and recommendation of my mentor and guide, head of the biological sciences department at BITS Goa, professor Srikanth Mutnuri. Professor Hoffmann kindly agreed to mentor me for the internship, and with his support I applied for Caltech's Summer Undergraduate Research Fellowship." The application process was based on the grant-writing process, wherein he had to come up with a detailed research proposal and explain it in simple terms to the selection committee. "I believe that my proposal, along with strong recommendations from my professors, and the experience I had gained in related internships at IIT-Bombay in 2016 and at the National University of Singapore in 2017 were what strengthened my application for the fellowship," he adds.

As a part of this programme he will work under the guidance of professor Michael Hoffmann from the department of environmental science and engineering at Caltech on a project titled 'Electro-Fenton Process for Decentralised Treatment of Municipal Wastewater' which aims to design prototype on-site electrochemical reactors to treat wastewater for reuse, aimed at deployment in the developing world, where clean water is scarce and sanitation facilities are urgently needed.

Expressing his happiness on being selected for the fellowship, he says: "I am very thrilled at having been selected for this internship. Given its acclaimed status and very selective application process, I had not expected that I would get the opportunity to take up this fellowship." He would like to use this internship to learn from and contribute to the cutting-edge research being done at Caltech and to build lasting connections with my mentors colleagues and fellow interns from diverse backgrounds. Nissim hopes this exposure and experience becomes a stepping stone to higher studies and further research in the fields of environmental engineering, renewable energy and sustainability, which are his core interests.

After completing his course at BITS Goa, he intends to pursue higher studies in this field and eventually work towards solving environmental and energy issues through technology development.