

JEHAN DAFTARI

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EDUCATION

- **[BITS Pilani, K.K. Birla Goa Campus](#)** Aug'23 - May'27(expected)
B.E. in Electronics and Instrumentation Engineering CGPA: 6.44 / 10
- **PACE Junior Science College** Jul'21 - Jun '23
High School Diploma GRADE: 85.33 %

SKILLS

- **Languages:** Python, Java, C, C++, Flutter, HTML, JavaScript, Verilog.
- **Tools/Platforms:** Origin, TrackPy, DeepTrack, ImageJ, SpectraSuite, Git, GitHub, Visual Studio Code, Autodesk AutoCAD LT, LaTeX, ffmpeg.
- **Experimental Skills and Techniques:** Spectrophotometry, Sputtering, Optical Microscopy, Spin Coating, Synthesis of Particles, SEM (with assistance).
- **Languages:** English, Hindi, Marathi, Gujarati.
- **Marketing, Sales and Public Relations:** Sponsorship, Operations and PR.

MAJOR PROJECTS

- **Deep Learning Based Image Analysis for Colloidal Assembly.** Jan '25 - Present
[Dr. Indrani Chakraborty](#) & [Dr. Snehanshu Saha](#), BITS Pilani, KK Birla Goa Campus.
 - Used Machine Learning to identify multiple hierarchical structures, like chains of particles from the self-assembly of colloidal particles and identified their length and thus helped in characterization techniques.
- **Deep Learning Based Diffusion Analysis.** Jan '25 - Present
[Dr. Indrani Chakraborty](#), BITS Pilani, KK Birla Goa Campus.
 - Using Deep Learning and Convolution Neural Networks, to study the diffusion patterns of peptide/protein coated gold nanoparticles diffusing on a protein functionalized surface, tracking it via Python.
 - Analysed the system and wrote algorithms to track particle trajectories and identify whether the particle is diffusing with Brownian Motion, Fractional Brownian Motion (FBM) or Continuous Time Random Walk (CTRW).
- **Colloidal Studies for Micro-Robotics.** Oct '24 - Present
[Dr. Indrani Chakraborty](#), BITS Pilani, KK Birla Goa Campus.
 - Working on the synthesis of multiple isotropic and anisotropic particles like, cubes, peanuts, spheres and conjugates.
 - Studying collective behaviour induced by electromagnetic fields, including structural and diffusion dynamics.
- **Make a one-pixel liquid crystal display.** Mar '24 - Dec '24
[Dr. Indrani Chakraborty](#), BITS Pilani, KK Birla Goa Campus.
 - Designed, built and calibrated a one-pixel twisted nematic display to show perfect switching of on and off states.
 - This setup can be used as a sensor for systems studied under a microscope under the effect of electromagnetic fields.
- **Developing a Liquid Crystal-based Thermometer** Dec '23 - Nov '24
[Dr. Indrani Chakraborty](#), BITS Pilani, KK Birla Goa Campus
 - Made samples of a ChLC composed of Cholesteryl Pelargonate, Cholesteryl Benzoate and Cholesteryl Oleyl Carbonate.
 - Studied the properties of the Cholesteric Liquid Crystal (ChLC) along with how different components affect the sample.
 - Formulated various liquid crystals with a precision of 0.25°C, 0.5°C and 1°C, thus satisfying the experiment's aim.

HONORS & AWARDS

- Received the **Molbio Student Innovation Award** from Molbio Diagnostics Ltd., with **funding** for a healthcare-focused research project.
- Selected for **Project Sparkle**, a four-member interdisciplinary research team spanning all academic years.

EXTRA-CURRICULAR ACTIVITIES

- **Student Coordinator** Jan '25 - Present
Practice School Division, BITS Pilani, KK Birla Goa Campus
 - Managed placement of 3,000+ students in summer internships at partner companies and organizations.
 - Facilitating a graded academic internship program providing professional workplace exposure, enhancing students' communication skills, and contributing five units to their core curriculum.
 - Fostering sustainable university-industry partnerships that enable hands-on learning for students while providing organizations access to skilled talent through efficient communication networks.

Poster Presentation

Oct '24

- Presented a poster titled, 'Liquid Crystals: Single-Pixel Displays and Precision Temperature Sensors' at the Open Day event.

Peer Mentorship Program (PMP)

Aug '24 - Present

BITS Pilani, KK Birla Goa Campus

- Mentoring a group of students, currently in their first year, helping them grow in campus both academically and in extra-curricular activities, by holding constant meets constantly available to them over digital platforms to guide and give advice.

Fest Organizing Committee

Aug '23 - Present

BITS Pilani, KK Birla Goa Campus

- Played a key role in organising all three fests on campus with fest budgets greater than one crore individually.
- Successfully brought multiple sponsors amounting to INR 10 lakhs (~USD 6,000) for Quark, the annual techno-management fest.

ORGANISATIONS

Nirmaan.org BITS Goa & Abhigyaan BITS Goa

Jun '23 - Present

Role: Project Lead | Cause: Education for All

- Led and facilitated daily educational activities for students in grades 1-12 within the Lamani slum area around campus.
- Coordinating and organising 15+ community events for children and families in the slum, with several events and multiple initiatives successfully completed and more planned.

Shraddha Charitable Foundation

Jan '18 - Jul '23

Role: Volunteer | Cause: Women's Empowerment

- Facilitated workshops and training sessions on topics such as financial literacy, entrepreneurship, leadership development, self-defence, and health and wellness. Actively worked to facilitate the rehabilitation of widows and older women.
- Participated in advocacy campaigns and awareness-raising activities to promote gender equality, women's rights, and issues affecting women in society. Engaging in outreach activities to connect with women in marginalised communities, providing them with information, resources, and support services to address their specific needs and challenges.