

Divyanshu Ray

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EDUCATION

Navrachana International School, Vadodara, India;	2012 - Present
- International Baccalaureate Diploma Program, Grade 12;	2012 - Present
- Course Work: HL: Physics, Math, & Chem; SL: Economics, English L & L, & German AB	2012 - Present
- Grade 10: IGCSE from Navrachana International School	2024

STANDARDISED TESTS

- SAT: Total – 1450; Math – 770; Writing – 680	2025
- IELTS: Overall – 8.0; Reading – 9.0; Listening – 8.5; Writing – 7.5; Speaking – 7.5	2025

ACADEMIC HONORS AND AWARDS

- Published Research Paper on Green AI and Sustainable Manufacturing at the International Journal of Engineering and Advanced Technology	2024 – 2025
- Awarded British Science Gold Crest for Research Project: Unmanned Machining Excellence: VMC Optimization	2025
- Awarded Champion for scoring in the 97.67 th percentile at the International Mathematics Challenge	2025
- Cambridge International Certificate of Education (ICE) – Distinction for 4A*s and 2As in IGCSE	2024

LEADERSHIP

- President, Rotary Interact Club of Baroda Cosmopolitan — Led club operations and 60+ members; planned initiatives, managed budgets, and coordinated partners/sponsors. Raised ₹94,000+ for a Cervical Cancer Vaccination Drive, funding the full 3-dose course for Paathshala Hostel teens and organizing a winter sweater donation. Directed the Don Bosco Snehalaya Children's Day Fair for 800+ underprivileged kids, streamlining logistics and games to maximize engagement; mentored and trained the incoming board for continuity.	2024 – 2025
- Founder & President, NISV STEM Club — Launched the school's first student-run STEM club; set vision, charter, and core team. Designed and led hands-on challenges (e.g., inclined-plane drop-car build, bridge design, coding basics), building a consistent pipeline of projects and showcases. Started a STEM Speaker Series with alumni/industry guests; mentored juniors, created safety SOPs and rubrics, and wrote an onboarding playbook to ensure continuity.	2024 – Present
- School Sports Captain & Commander of School Parade — Led march-past drills and ceremony protocols; coordinated contingents and timings for school events. Organized the prestigious ISSO tournament a national-level football and basketball. Streamlined logistics (kits, transport, rosters, medical desk, schedules), improving on-time starts and compliance across events.	2024
- Chairperson, ECOFIN (NIMUN – an International MUN) — Set agenda on debt sustainability ; authored the background guide and evaluation rubric. Ran a two-stage crisis to drive focused debate and clause-level negotiations. Moderated sessions, enforced RoP, and delivered targeted feedback on papers and drafts.	2025
- Captain, School & Baroda City Basketball Teams — Led squads on tactics, rotations, and fixtures; coordinated kits, transport, and schedules. Competitive highlights: 3rd place at ISSO Nationals; 8× state-level (Gujarat) player; 3× national-level player.	2022 - Present

WATER HARVESTING INITIATIVE

- Designed & installed borewell recharge filters across Vadodara , channeling rooftop rainwater into existing borewells via first-flush diversion, silt/leaf traps, and multi-media filtration (sand–charcoal–gravel). Impact: Borewells to return ~1.1 million liters over 5 years; multi-site rollout reduces urban runoff and dependence on tanker water during peak summer.	2025
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SCIENCE AND ENGINEERING EXPERIENCES

- Author , “A Comprehensive Review of Green AI Applications for Sustainable Manufacturing & Supply Chain Management,” <i>IJEAT</i> (Vol. 15, Issue 1; Oct 2025). Covers: How Green AI is used for energy & waste reduction, predictive maintenance, carbon/resource optimization across manufacturing and supply chains. Takeaways: Studies report ~10–20% energy cuts and 15–20% waste reductions; paper outlines a practical roadmap (EMS + AI, digital twins, blockchain, robotics) for scaling.	2024 – 2025
- Research Project - VMC Optimization, Elmex Controls — Integrated 3R zero-point, Blum laser/touch probes, and ATC with custom M-codes & SOPs to move from manual to unmanned-ready ops. Outcomes: setup 20–25 → 2–5 min (~90%↓), tool change ~5 → ≤1 min, precision ±0.02 → ±0.005 mm, FTR >95%, +40% throughput, –50% rework. Built a trial-data dashboard, trained operators, and	

- standardized safety/probe-alert routines for repeatable scaling. **Recognition:** Awarded the **British Science Association's Gold CREST Award** for applied innovation and sustainability. 2025
- **Manufacturing Intern (Moldflow), Elmex Electric Pvt. Ltd.** — Ran Autodesk Moldflow for gate/runner, packing, cooling, and warpage analyses. Diagnosed fill defects (air traps, weld lines) and warpage; recommended gate moves, runner sizing, packing profiles, and cooling tweaks. Worked with toolroom to implement changes, cutting cycle time and improving dimensional stability/yield. 2025
 - **Automation & OEE Intern, Elmex Electric Pvt. Ltd.** — Programmed basic PLC ladder logic and set up sensor I/O for machine interlocks; configured simple HMI screens for start/stop, alarms, and counters. Built a lightweight OEE/idle-time tracker (cycle time, availability, rejects) using spreadsheets + shop-floor logs, enabling daily stand-up reviews and bottleneck spotting. Standardized tool-offset/calibration and shift-change checklists, improving first-part quality and reducing unplanned stoppages. 2025
 - **Arizona State University (3 courses):** 3D Printing Technology; Prototyping; Engineering Design — CAD basics, DfM, tolerance testing, slicer settings, iteration logs. 2024
 - **Georgia Tech (Introduction to Engineering Mechanics):** Statics foundations—free-body diagrams, equilibrium, stress/strain basics; boosted modelling/problem-solving rigor. 2024
 - **Inspirit AI (Student Program):** Led by Stanford & Ivy League alums. I built a “Moneyball” project using Python and machine learning, practicing data cleaning, model evaluation, and clear technical communication through a final talk. 2025
 - **Plaksha University (2-week Engineering & Robotics Summer School):** Designed, built, and coded a gesture-controlled car end-to-end. Learned Python and Java fundamentals, sensor input handling, and rapid prototyping—from wiring and debugging to iterative testing and demo. 2024

MODEL UNITED NATIONS

- **Chairperson, ECOFIN — NIMUN (International MUN):** Set agenda on debt sustainability; wrote background guide and ran a two-stage crisis. 2025
- **Co-Chairperson, ECOFIN — NIMUN:** Moderated debate, enforced Rules of Procedure, and evaluated drafts. 2024
- **Delegate, Russia, ECOFIN – NIMUN:** Best Position Paper award at Navrachana International MUN. 2023

VOLUNTEER WORK

- **Volunteer, Hospital Oncology Playroom** — Painted the door of the playroom where children with cancer spend time, creating a brighter, welcoming space. Engaged kids through play, puzzles, and simple art activities to lift mood and confidence. 2025

SUMMER COURSES

- **Woodstock School (Leadership Intensive):** Short, hands-on modules in team dynamics, delegation, and conflict resolution; applied reflective journaling to improve how I plan and run student projects. 2023
- **University of Queensland Ventures (Entrepreneurship Discovery):** Customer interviews, lean experiments, value-prop mapping; weekly venture logs to turn ideas into testable hypotheses. 2022

SKILLS AND INTERESTS

- **Coding & Tech:** Comfortable with Python for data wrangling and basic ML workflows, plus CAD → slicing → FDM tuning for 3D printing. I've also used Autodesk Moldflow for simulations and have introductory experience with PLC ladder logic and simple HMI screens.
- **Art:** I'm a doodler and sketcher who loves experimenting with mixed media and new textures; it's how I unwind and think. I've designed pieces for the cover for a Teen Zine magazine *Whispers to Voices* and enjoy turning simple ideas into bold, clean visuals.
- **Sports:** I'm a basketball-first athlete—team captain with years of competitive play. I also enjoy playing other sports recreationally, including badminton, football, and cricket, which keep me agile and competitive.