VANYA GUPTA

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EDUCATION

Fravashi International Academy,*Nashik, India;* 2013-Present
– *Cambridge International AS & A Levels, Grade 11 and 12* 2024-Present
– *Cambridge IGCSE, Grade 10* 2022-2024

STANDARDIZED TESTS

- **SAT Examination** 2025
- **IELTS Examination** 2025

ACADEMIC HONORS AND AWARDS

- Academic Excellence Award (APEX award) for consistently achieving top grades 20222-2026
- APEX award for Young Changemaker and Young Achivements 2022-2026
- India's Most Inspiring Young Achivers Award (Ministry of Women and Child Development, Government of India) 2024

TECHNOLOGY AND INNOVATION

SIM-T (Seizure Identification Mechanism in Toddlers) : An AI-powered device using non-invasive sensors and ML algorithms to detect early seizure signs in toddlers, ensuring fast alerts for caregivers and healthcare providers.

Awards:

- *Patent Awarded* 2025
- *Research Paper in IEEE - Best Paper Presented Award at IEEE* 2023
- *Top 100 IRIS Nationals and Director's Choice Award World STEM Robotics Olympiad* 2022
- *Top 3 Indian Finalists – Intel® AI Global Impact Festival* 2023
- *Finalist – St. Yau High School Awards (Asia)* 2022

SoundKraft : A gamified cognitive screening tool for early detection of geriatric cognitive decline, analyzing auditory and reaction-based task data with AI/ML for accurate, accessible assessments.

Awards:

- *3rd Grand Award in Behavioural and Social Sciences at Regeneron ISEF* 2025
- *Special Award – 2nd Behavioural and Social Science Award by Sigma Xi at Regeneron ISEF* 2025
- *IRIS Grand Award and Selected for Diamond Challenge – Second Round* 2025
- *Patent Applied* 2025

PCOScope : An AI/ML-based screening model predicting PCOS risk using tongue images and key health metrics, offering a low-cost, non-invasive diagnostic solution.

Awards:

- *Selected in IRIS 2024–25 Cohort 2 as Top 50 and Top 200 – Vivo Ignite* 2024,2025
- *2nd Place – Codeavour Nationals; Selected to represent India at Codeavour Internationals, Qatar* 2025
- *Passed Initial Screening – St. Yau Awards* 2025

COGNITIVE ASSESSMENTS AND LIVELIHOOD DEVELOPMENT

EKATVA-COGNITIVE ASSESSMENT USING MIDI DRUM TECHNOLOGY FOR THE UNEDUCATED : Cognitive assessment using MIDI drum tech to map strengths in undereducated individuals, followed by tailored vocational training. Enabled sustainable livelihood and empowerment through skill-based upskilling.

Awards:

- *Top 100 IRIS Nationals and Future Port Youth Awards – Global Impact Award Runner-Up* 2024
- *Bronze Medal – Eskom Expo for Young Scientists International Science Fair (Social Science Category)* 2024
- *Gold Crest Award – British Science Association* 2024
- *Research Paper in ICFAMEAD* 2024

SkillMatrix : Gamified cognitive assessment to profile blue-collar workers' strengths and guide role allocation on the factory floor. Skill-aligned training and promotions led to higher income, driving livelihood empowerment.

Awards:

- *Research Paper Accepted in ICoICI 2025* 2025

INTERACT CLUB (ROTARY SCHOOL INITIATIVE)

Interact Club – President, *Fravashi International Academy;*

Headed the school's Interact Club, spearheading community service initiatives including literacy drives and rural health camps. Coordinated large-scale charity and youth engagement events to expand the club's reach and impact.

Awards:

- *Presidential Award for Excellent Service Project for Underprivileged* 2025
- *The Rolling Trophy and The Khandve Memorial Award for Best Interact Activity of the Year* 2025
- *Best Interact Club – for the 5th Consecutive Year* 2025

RSI-INDIA 2025

RSI India 2025, *Indian Institute of Science (IISc) Bangalore;*

Selected for the inaugural session of the Research Science Initiative–India(Indian Chapter of the MIT Research Science

Institute), at IISc Banglore, as one of 31 participants chosen from over 900 applicants nationwide.
Project:
- *"Evaluating Human Face Beauty Perception Against Object-Trained CNN Predictions"* under the mentorship of Professor S.P. Arun at the Vision Lab, Centre for Neuroscience.

SCIENCE & TECHNOLOGY OUTREACH

InnoSphere*, Nashik, India;*
Founded Nashik's first STEM club to foster innovation, research, and hands-on learning among school students. Led workshops, outreach programs, and created educational resources to engage youth in science and technology.
Highlights:
- *Conducted a Research and Innovation Day workshop for 250+ students (Grades 5–8) at Fravashi International Academy*
- *Organised a STEM Day workshop for 300+ students from schools across Nashik (Grades 7–10)*
- *Authored and published "Cyber Detectives: A Fun Guide to Staying Safe Online" and sold 300+ copies to raise funds*

ENGINEERING EXPERIENCES

VRM Metazine Pvt. Ltd.*, Nashik, India;*
Worked on cost-saving, quality improvement, and automation projects in a sheet metal press shop environment, driving operational efficiency and productivity gains.
Projects:
- *Cost Saving through Blanking Operation Transformation* – Streamlined press-line by shifting operations from deep drawing to blanking, reducing scrap and material use. 2025
- *Camera-Based Quality Inspection Automation* – Built an automated camera inspection system for real-time defect detection. 2025
- *IoT-Enabled Plant Automation* – Installed IoT sensors across machines to track productivity and downtime for data-driven optimisation. 2025

One-Day Industrial Observation – Schneider Electric*, Nashik, India;* Observed lean manufacturing and quality control processes at Schneider Electric, a global leader in energy management and automation.
One-Day Industrial Observation – EPCOS (TDK Group)*, Nashik, India;* Observed capacitor production and testing processes at EPCOS (TDK), a leading manufacturer of electronic components.
Research Assistant – Professor Mandar Inamdar, IIT Bombay*, Mumbai, India;* Assisted Prof. Mandar Inamdar on a nanobiotech research project, creating computational codes for data analysis and simulations.

STEM ENRICHMENT PROGRAMS & INITIATIVES

PACT (Program in Algorithms and Combinatorial Thinking)*, Prof. Rajiv Gandhi – University of Pennsylvania / Rutgers University;* Attended Group1, year round and Group2 programs; served as a Teaching Assistant (2023–26), mentoring Group 1 students and supporting curriculum delivery. 2023-2026
Euler Circle – Prof. Simon Rubinstein-Salzedo; Completed advanced mathematics coursework: Transition to Proofs (number theory, combinatorics, analysis), ndependent research and paper-writing project on infinite Pell's equation solutions via continued fractions, and Fundamentals of Higher Mathematics. 2021-2023
Raising a Mathematician (RAM) Programs; Completed the Raising a Mathematician Advanced Program (CMI, 2023); selected for Math.Biz 2023 (Mahindra University) and among 28 students nationwide chosen for Epsilon India 2020.2020,2023
World Science Scholar (WSS'24); Selected for the 2024 World Science Scholars cohort of 52 students, receiving interdisciplinary mentorship from leading scientists. 2025
First Tech Challenge (FTC); Competed in 3 consecutive seasons, represented India at the Asia Pacific Open Championship in Australia, earned national and international accolades. Served as Non-Technical and Community Service Head (2021–2023). 2021-2023
Intern – TLUPS MAA under Syam Chandra; Oversaw team selection and coordination for elite competitions like HMMT, Stanford Math Challenge, and Berkeley Math Tournament. 2024

EXTRACURRICULARS

Kumbathon – Startup Outreach Team*, Nashik, India;* Member of the Kumbathon 2025 Startup Outreach Team, fostering collaboration between local entrepreneurs, tech innovators, and social-impact initiatives. 2024
Nashik Model United Nations (NMUN); Served as Charge D'Affaires on the NMUN 2024 Secretariat Core Team, overseeing coordination; and Vice-Delegate Affairs (2023), managing delegate communication and operations. 2023,2024
Mallakhamb – Teaching & Advocacy; Taught rope Mallakhamb to 18 visually impaired girls at NAB Nashik, fostering confidence, strength, and discipline 2022-Present

SKILLS

Technical: Python, MATLAB, Java, C, AI/ML model development, Data analysis, Computer vision, IoT integration, Image processing, CAD Design, Robotics systems, 3D Printing.
Analytical: Statistical modelling, Experimental design, Hypothesis testing, Problem-solving, Optimization techniques, Scientific writing, Literature review, Research methodology.
Tools & Platforms: TensorFlow, PyTorch, OpenCV, Jupyter, Arduino, Raspberry Pi, Git/GitHub.