# Rehaan Kothari

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#### **EDUCATION**

Jamnabai Narsee International School, Mumbai, India  — International Baccalaureate Diploma Program (IBDP) Grade 12  — International General Certificate of Secondary Education (IGCSE) Grade 8 to Grade 10	<b>2024-25</b> 2021-24
STANDARDISED TESTS	
• SAT Score	
• IELTS	
• IBDP GRADE 11 39/42	2024
ACADEMIC HONORS AND AWARDS	
• World Topper for securing 100% in Mathematics IGCSE	2024
• School Topper in Mathematics, Physics and Economics in IGCSE in 2024.	2024
Awarded 'Outstanding Cambridge Learner Award'	2024
• Validation in Grade 10 with 6A* in IGCSE Board examinations	2024.
• Subject Achievement Awards in Physics HL and Economics HL in Grade 11	2025
• Certificate of "DISTINCTION" in FERMAT CONTEST for the 'centre for 'Education in Mathematics and Computing' (CEM	C contest) in 2024.
• Gold Crest Award— on implementation of Lean Manufacturing in the diamond industry and it has been awarded a CREST Go	ld Award. 2025
Marshal Eco competition (awaiting result)	
Leed Platinum Certification obtained	2025

## ENGINEERING EXPERIENCES AND RESEARCH

# Author, Research Paper:

- Researched and developed an original paper under the mentorship of Dr Mehul Shah on the implementation of Lean Manufacturing in the diamond industry 'Supreme Gems' Dahisar (Mumbai) India. Conducted site observation, employee interviews and data collections.
- The project examines machine flow through Value Stream Mapping(VSM). It also evaluates how effective the process is at reducing waste and identifies the processes that benefit the most from lean changes, thereby determining how beneficial lean manufacturing is for the diamond industry. The result gave actionable recommendations for increasing operational effectiveness, optimising resource utilization and overall productivity.

# Author, Research Paper:

- Written a original paper on the study on Robotic cleaning system on Solar panelling Interned at Solar-LIT Company at Khavda Renewable Energy
  park in Kutch Gujarat.
- Analysed an Automatic Robotic Cleaning System for solar panels, Learned AI-driven dirt detection, robotic navigation, and eco-friendly cleaning
  methods that enhance energy efficiency, reduce manual labor, and support sustainable renewable energy innovation through advanced robotics and
  artificial intelligence applications. I also explored optimising this system using sensor integration and data analytics.

# **ENGINEERING EXPERIENCE**

## Intern | Larsen & Tuboro, Chennai

2025

- Gained hands on exposure in how valves were produced and designed as well as understanding and observing how the operating mechanisms work.
   Observations of the design, sizing, materials, testing, and operations, working across manual, powered, and automated systems was done.
- Gained practical experience that enhanced my technical understanding, practical application skills, and knowledge of quality standards, preparing me to address real world engineering challenges effectively.

## Intern | Metal Craft Engineering & Spring Industries, Mumbai

2024

- Explored the firm's product offerings, manufacturing capabilities, operational methodologies, comparative strengths, and strategic positioning in the Indian precision engineering ecosystem.
- Job shadowed to understand the high-precision metal component production both as a regular and as special parts with advanced tools and high-quality workmanship

# Intern | Solar lit Robot based cleaning system on solar panelling at Khavda renewable energy park, Kutch Gujarat. 2025

- Gained hands-on experience at the Solar-LIT robot cleaning system company where learned AI driven dirt direction,eco friendly cleaning method.
- Was a part of the design and construction of the Solar LIT robot team. Here the experience strengthened my technical and research skills in renewable energy innovation through advanced robotics applications.

#### ONLINE COURSES

**Inspirit AI program**-I obtained a certificate of completion after completing the 'Inspirit AI Scholars Program'. I successfully completed a Music Recommendation Project as part of the program, improving my coding, critical thinking, and project management abilities while gaining practical experience in AI, machine learning, and data-driven problem-solving in 2025.

**Floor cleaning robotic project**-Currently engaged in a robotics project aimed at creating a robot that can clean floors. The project combines C++ and Java for automation, navigation, and control system programming. It improves mechanical integration, coding, and problem-solving abilities while giving practical experience in creating effective robotic solutions for real-world, daily cleaning applications.

Design Thinking of Innovation from University of Virginia from Coursera Online course in 2025.

Applications in Engineering Mechanics from Georgia Technology from Coursera online course in 2025

#### COMMUNITY SERVICE

## President | Interact club of 'Rotary Club Of Mumbai GenX.

Organised Festive projects like 'Festival of India' as 'Ganpati Visarjan', 'Ras Garba' events, coordinating social initiatives and engaging youth to drive a positive impact.

#### Founder | 'Fuel a Dream' campaign for underprivileged children in school

Conducted Drives which provided the students with back to school kits. (which includes Books, bags, stationery, footwear, school dress, study mat, masks etc)

## Volunteer | Socially and actively engaged in 'Lakhania Village'in Gujarat

Organised planning and executing community initiatives including Lakhania Utsav, teaching sessions, science experiments, sports events, a medical camp, and food service, while fostering meaningful bonds with village students through diverse collaborative activities.

Founder | Solar-lit Unemployed workers Empowerment & Social Impact

2025

Organised unemployed workers to be a part of the team and trained them working for an Automatic Robotic Cleaning System for solar Panels, with the help of AI driven dirt detector and eco friendly cleaning method it enhances energy efficiency through advance robotic system.

## EXTRACURRICULAR AWARDS

- Awarded Excellence Certificate for Eumind Project Europe for 'The Creative Entrepreneur
- Awarded 'Certificate of Excellence Best Article On Project for- '3 Generations' on Healthy Life for exchange Program 'Eumind- Europe Meets India'.
- Certificate of Participation in HMCSF Young Leadership Program in 2023
- Participated in the Committee G20 at the International Youth Conference in September 2022
- Participated in the Committee G14 at the International Youth Conference in September 2024
- Awarded as 'First Position' in 'Grand Cultural Event' Jamnabai Narsee International School in 2024.
- Awarded for Guitar Grade 4 for 'Rock and Pop' in Trinity College London in March 2022

#### **SPORTS**

- Achieved level 4 for Skiing at Les Elfes International Camp in March 2023
- Awarded Certificate of Achievement as First Runner-up in Box Cricket at Quintessence in Jamnabai Narsee International School in January 2025
- Awarded Merit Certificate for standing Second in Inter-house Football in 2025.
- Awarded Merit Certificate for standing first in 'Boys Relay- 100 meters in Annual Athletic Meet in Jamnabai Narsee International School in Jan 2022
- Awarded 'Third Position' in InterHouse Football
- Awarded as Game developer with Whitehat Jr with deep UI/UX interface in 2022.

#### **SKILLS**

- Computer Skills : C++,Java,Python
- Languages: English, Hindi, Gujarati (native, trilingual), French & Spanish (novice)

#### INTERESTS

• Awarded Diploma in Japanese Martial Arts International (Regd)-Go-Ju- Ryu Karate -Do. as Black Belt 1, Black Belt 2 and 'Black Belt 3'