

PRANAV HARI PRAKASH

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EDUCATION

The Sanskaar Valley School, Bhopal;

- Cambridge International AS and A Levels, 11th and 12th Grade;
- Cambridge IGCSE, 10th Grade

2023-Present

2021-2023

STANDARDIZED TESTS

SAT: 1580; Evidence-Based Reading and Writing: 790; Mathematics: 790;

August 2024

SAT: 1540; Evidence-Based Reading and Writing: 780; Mathematics: 760

December 2022

ACADEMIC HONOURS

- Highest in Cohort for AS Level Physics Board Exam
- Distinction in University of Waterloo Avogadro Chemistry Olympiad
- Distinction in University of Waterloo Sir Isaac Newton Chemistry Olympiad
- Scored a 5 in AP Computer Science A
- Applied for CREST Gold Award for Fluid Film Bearing Reverse Engineering Project

2024

2024

2024

2024

2024

CLIMATE LITERACY INITIATIVE

2024

- The Climate Literacy Initiative is an educational outreach program done alongside the Bansal Institute of Science and Technology to educate college students on climate change and its impact on their future, how to adopt an environmentally friendly lifestyle and on different measures to combat climate change.

- The initiative has educated more than 5000 students across the state of Madhya Pradesh on climate literacy.

STEM EXPERIENCES AND RESEARCH

2024

Research:

Omega Industries Private Limited, Bhopal, India

2024

Omega is a global supplier that manufactures white metal fluid film bearings for OEMs such as Siemens and GE with end-uses in the nuclear, defence, and thermal power generation fields.

Reverse Engineering Project:

- Participated in a project at Omega Industries where a high-precision bearing was designed and manufactured for the Indian Navy's new nuclear aircraft carrier using only the bearing that needed to be replaced.
- The bearing was precisely measured and examined using non-destructive testing, following which schematics were produced and the original materials used were determined and alternative materials were suggested. A prototype was then constructed and sent to the Indian Navy for testing. After the prototype was approved, Omega received an order to put the bearing into production.
- Learned about reverse engineering, both in general and in the context of the bearing. Observed and documented the full process for two bearings, both of which had their prototypes approved and then put into production during my time there.

Applications of Biochar in Indian Aquaculture Wastewater, Independent Research Project

2023-2024

- Spent a year researching for and writing a review paper on the efficacy of biochar, which is a highly porous organic material produced by the low-oxygen pyrolysis of different carbon-rich feedstocks, in treating wastewater produced from aquaculture, with a focus on its applications in India and the wider South Asia region.

Internships:

Adani Green Energy Limited, Ahmedabad, India

2024

Adani Green Energy Limited (AGEL) is an Ahmedabad-based company with over 3000 employees that is a world leader in renewable energy production. Their Khavda site will be the largest power plant in the world once completed, with a projected energy capacity of 30 GW.

Summer Internship under Mr. Vneet S Jaain, Managing Director of AGEL

- Completed a one-month full-time internship at Adani Green Energy Limited in the Managing Director's Office, wherein I learnt the role of the Managing Director and his assistants
- Visited the Mundra Port, which is the busiest port in all of India, to understand the operation and logistics of the port, as well as the surrounding Special Economic Zone which houses Adani Group's solar panel and wind turbine manufacturing facilities
- Visited the Khavda Renewable Energy Park, which is roughly five times the size of Paris

Altigreen Propulsion Labs Private Limited, Bangalore, India

2023

Altigreen Propulsion Labs Pvt Ltd is an indigenous and rapidly growing manufacturer of electric vehicles that has 29 technology patents and over 30 dealerships across India.

Summer Internship at Malur Manufacturing Facility

- Undertook a two-week full-time internship in the Malur manufacturing facility of Altigreen Propulsion Labs Pvt Ltd, learned about the design and workflow of manufacturing facilities
- Conducted a process study to help improve efficiency on a particular sub-assembly of Altigreen's NeEV electric 3-wheeler

Observerships:

Two Observerships at Omega Industries Private Limited:

2024

- Conducted one observership wherein I spent time in the foundry, learning in detail how white metal bearings were centrifugally cast.
- Spent time in the office, learning about the business-related aspects of the company, such as client interaction

Online Courses:

Coursera Design and Engineering:

2024

Currently enrolled in the Fundamental Skills of Engineering Design course by University of Leeds, planning to enrol in The Engineering of Structures Around Us Specialization by Dartmouth University

SPEECH AND DEBATE ACHIEVEMENTS

Vice President of The Sanskaar Valley School's Speech and Debate Club

2024-Present

- Represented my school in multiple prestigious debates, including the Jaipur Debate 2024, the MU20 Debate 2023 and the Invictus Debate 2023
- Organized, facilitated and participated in the Sanskaar Valley Debate 2024
- Was a school representative at the Round Square International Conference 2023 in Nairobi, Kenya

ARTIFICIAL INTELLIGENCE, TECHNOLOGY AND COMPUTER SCIENCE

Inspirit AI Scholars:

2024

Attended a 5-week online group summer program in Summer 2024 teaching students about AI, with a focus on chatbots such as ChatGPT, and produced a presentation at the end of it explaining the different types of chatbots, their development, and the ethics surrounding them

NVIDIA iD Tech Jetson AI Specialist Course:

2022

Attended a 10-week online course run by iD Tech in collaboration with NVIDIA that taught me how to use the Jetson Nano single-board computer to run AI programs, and made an image classification program at the end of the 10 weeks that could distinguish real gold from "fool's gold" (iron pyrite)

GenWise Artificial Intelligence/Machine Learning:

2022

Attended a 3-week intensive in-person group summer program at the University of Manipal in Summer 2022 which teaches students about artificial intelligence in detail, including the different types of AI, how machine learning models and deep learning models are trained, their applications in real life, and some of the specifics and coding behind how to construct an ML model independently

Independent Math AI Project:

2024-Present

Currently working on an independent project with my group from the 10-week Inspirit AI program, wherein we are building a program that can scan written math problems, convert them into digital form, and provide solutions, with a focus on pure mathematics up to the high-school level

COURSES, WORKSHOPS AND SUMMER PROGRAMS

Wharton iD Tech Intro to Investing Course:

2022-2023

Took part in a 10-week online course and group competition, run by iD Tech and in collaboration with the Wharton School of the University of Pennsylvania, where students were taught the basics of making investments in the stock market and cryptocurrency, and participated in a competition as part of the course wherein teams had to create virtual stock portfolios according to the needs and reservations of a specific client

ISSOS:

2022, 2023

ISSOS is a UK-based in-person summer school program that provides 3-week learning and cultural enrichment programs.

- Attended ISSOS 2022 at University of St. Andrews, did the Debate academic course where I learned the basics of British Parliamentary debate, participated in the golf elective, acted as the Serjeant-At-Arms at the Final Debate
- Attended ISSOS 2023 at University of St. Andrews, did the Youth Leadership academic course and furthered my interest in golf

SKILLS

CS Skills: Can code in Python and Java, proficient with Machine Learning

INTERESTS:

Reading, baking, video games, cars, history