# **AAHAN PRAJAPATI**

+91 91065 27914 | 21-Himalaya Retreat, 100 Ft Road, Anand, Guj., India

aahanprajapati28@gmail.com https://www.aahanprajapati.com

https://www.linkedin.com/in/aahan-prajapati-43b601273

## **EDUCATION**

#### Adani International School, Ahmedabad

2024-2026

- Grade 11: 40/42 | SAT 1550/1600 | Duolingo 155/160
- AP Classes: AP Chemistry: 5, AP Biology: 5, AP Calculus AB: 5, AP CS: 5, AP Psychology: 5, AP Macroeconomics: 4

#### Anandalaya School, Anand

• Grade 10 (CBSE): 97.8 % | First Rank in School & Anand District

2022-2024

#### **RESEARCH EXPERIENCE**

# Machine Learning-Based Early Diabetes Prediction (RSI INDIA)

June 2025-July 2025 6 Weeks, Residential

Indian Institute of Sciences, Bangalore

Mentor: Prof. Siddharth Jhunjhunwala, Department of Bioengineering

- Developed one of the first ML frameworks for diabetes prediction on Indian cohorts.
- Achieved 91.1% accuracy using seven non-glycemic features on the IISc-ICPH dataset.
- Presented findings at IISc. Recognized with the Outstanding Written Presentation Award in Biology.

# **Color Vision Deficiency Computational & Survey Research**

Dec 2024 - July 2025

Mentor: Dr. Ajay Goyal, Nirma University, Ahmedabad

#### Color Blindness Awareness Survey and Data Analysis using MATLAB

- Surveyed 482 students, teachers, and parents to assess awareness and challenges of color blindness.https://www.frontiersin.org/journals/artificial-intelligence/articles/10.3389/frai.2025.1676644/full
- Applied statistics, logistic regression, and decision tree classifiers.
- Presented at the Indo-French Conference on AI & Healthcare at IIT Delhi the only High School Student Presenter.
- Research was published in the International Journal of High School Research\*.

https://terra-docs.s3.us-east-2.amazonaws.com/IJHSR/Articles/volume7-issue8/IJHSR\_2025\_78\_23.pdf

#### **Computational Analysis of Ishihara & Educational Images**

- Simulated how individuals with Protanopia, Deuteranopia, and Tritanopia perceive Ishihara plates using MATLAB.
- Built AI classifiers (SVM, logistic regression) and applied daltonization techniques, achieving 99.76% accuracy.
- Presented findings at the IAPSM National Conference, Srinagar, as the only High School Student Presenter.

#### ML Model for Image Enhancement for Colorblind Individuals

- Developed an ML-based tool to enhance images for CVD users, improving the clarity of educational diagrams.
- Validated with affected participants, achieving 99.76% accuracy in CVD type classification.
- Awarded the Crest Gold Award for this research.
- Featured in national newspapers and media with Total Mentions-167, 570 Million reach (25Print, 6TV channels, 136online)
- Research paper published in Frontiers in Artificial Intelligence.
  https://www.frontiers.in.org/journals/artificial-intelligence/articles/10.33

 $\underline{https://www.frontiersin.org/journals/artificial-intelligence/articles/10.3389/frai.2025.1676644/full}$ 

#### Cambridge Research Scholar Program (Acceptance rate: 15 %)

May 2024 - Aug 2024

Independent Research - Cambridge Centre for International Research (UK) (Remote)

- Studied advanced concepts of neuroscience and how to conduct independent research.
- Prepared posters for spreading awareness for Alzheimer's Disease (AD) using Canva software.
- A review article on modifiable risk factors of AD was published in Curieux Academic Journal\*.
  <a href="https://www.curieuxacademicjournal.com/\_files/ugd/99711c\_0af2ac13133c45d5aef4b3598fde2a2e.pdf">https://www.curieuxacademicjournal.com/\_files/ugd/99711c\_0af2ac13133c45d5aef4b3598fde2a2e.pdf</a>

#### **Gene Regulatory Network Research**

Jan 2025 - Present

Mentor: Mu Taka PhD, Cambridge University

• Building Gene Regulatory Networks using scRNA-seq data of retinoblastoma patients, publication pending.

# **LEADERSHIP & COMMUNITY SERVICE**

## Founder and Project Head - Aiding Colors Project for School Children

Dec 2023 - Present

- Initiated India's first school-based color vision deficiency (CVD) screening & awareness initiative in collaboration with Dr. Shivani Bhatt Charitable Foundation.
- Led a team of volunteers, screened 10,600+ children across 30 schools in Gujarat for CVD, identified 131 cases, and provided career and psychological counselling to diagnosed students and their parents.
- Developed ML model to design textbook study images & maps colorblind friendly.
- Prepared labelled color pencils to help colorblind students in art classes.
- Designed & distributed 5,000+ brochures in English and regional languages for raising awareness.

- Led 4-member school team to design SurgiCare, a patient education and support app.
- Features: All chat for surgery-related queries, mood/anxiety tracker, direct staff contact, surgeon dashboards with pre/post-op summaries.
- Integrated into 20+ hospitals 1100+ patients benefited.

#### Team Leader, Smart tennis racket (Maker's Asylum, Innovation School, Goa)

May 2024 - March 2025

- Led a team of 4 students, procured materials, and documented the innovation
- Developed a smart tennis racket that helps players track their shots and enhance their gameplay.
- Used an MPU6050 accelerometer and gyroscope to capture motion data of the racket and an ESP32 microcontroller for wireless transmission in real-time.
- Received an OSHWA certificate (UID: OSHWIN000063, March 20, 2025) for novel hardware innovation. https://certification.oshwa.org/in000063.html

#### **INTERNSHIPS**

# **Student Intern - Clinical Genetics Training**

Jun 2025 (2 Weeks)

Supervisor: Prof. Harsh Sheth, Indian Institute of Human Genetics, Ahmedabad

- Selected as the only high school student in the cohort.
- Gained hands-on experience in cytogenetics, performing karyotyping of my own blood, Sanger sequencing, and PCR,
  Performed data entry and patient counselling.

# Student Intern, Medical Internship (school-sponsored)

March 2025 (1 Week, Residential)

Supervisor: Dr. Rilpa Pandya, Gujarat Adani Institute of Medical Sciences, Bhuj

- Attended dissection labs and academic lectures in radiology, gynaecology, and the biomedical engineering dept.
- Assisted doctors during clinical rounds, sterilised OT instruments, and assisted in taking patient history and documentation
- Helped technicians in patient preparation in radiology, gave positions to patients during CT Scan & MRI studies.

#### **Summer Program on Introduction to Surgery**

July 2023 (2 Weeks, On-Campus)

Johns Hopkins University, USA (Credit -1)

- Gained practical training in suturing, knot tying, and pig dissection.
- Hands-on experience with the Da Vinci Robotic Surgical System.

#### **SCHOOL ACTIVITIES**

Jan 2025 - Present

#### Founder & President - Rubik's Cube Club

- Founded the school's first Rubik's Cube Club, inspired by his colour-blindness and passion for cubing.
- Built a community of 10+ members, including students and teachers.
- Guides peers in algorithms, speedcubing techniques, and problem-solving.

# National Cadet Corps (NCC) Military Training Run by Ministry of Defence, India

2022-2023

Completed 2 years of NCC training in school, earning the A Certificate with distinction.

#### AWARDS & RECOGNITIONS

- Crest Gold Award for "Computational Enhancement of Educational Images for the Colorblind" (Aug 2025)
- Recognised by national newspapers and media for Research work on Image Enhancement for Colorblind Individuals,
  Total mentions -167 (25 Print, 6 TV channels, 7 YouTube and 129 online), 570 Million Reach (Sep 2025)
- Outstanding written presentation of the research award in Biology RSI-India (July 2025)
- Chairman Endowment Fund Award for securing First Rank in Anandalaya school in Grade 10 (Jan 2025)
- AP Scholar with Distinction Award (July 2024, July 2025)
- SOF International Mathematics Olympiad Received 3 Gold at the school-level (2022-2024)
- Certificate of Distinction International Chemistry Quiz, the Royal Australian Chemical Institute (2023)
- Guinness World Record, for Most People Solving Rotating Puzzle Cube Simultaneously Online in India (Feb 2022)

# **CERTIFICATION & TRAINING**

- Completed two years of National Cadet Corps (NCC) Military Training, Run by the Ministry of Defence, India and earning the 'A' Certificate with distinction. (2022–2023)
- Trained Life Support Provider (COLS) Shree Krishna Medical College, Karamsad (Feb 2024)

#### **SPORTS AND HOBBIES**

**Table Tennis :** District champion, 4× state ranking, and selected for the TTFI National Ranking Tournament, Bangalore. Represented school U-17 & U-19 teams at ISSO.

**Speed-cubing:** Achieved an official best of 11.86s. Competed in 3 World Cube Association events, mastered 9 cube variants, and founded the school's first Rubik's Cube Club.

Karate: Achieved White, Yellow, Orange, Green and Blue Belts from All India Wado-Kai Karate-Do Association.

Trekking and Hiking: Completed Tirthan Valley Trek (10,800 ft.) and the Kedarkantha Trek in the Himalayas (12,500 ft).

Music: Singing, Instrumental- Tabla, Harmonium, Bamboo Flute, and Guitar