

Adidev Panday

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EDUCATION

Woodstock School Mussoorie, India

2021 to 2027

- **IB Diploma Programme** (Grades 11 & 12): 43/45 AG1 | Higher Level Subjects: Physics | Math AA | Computer Science
- **IB MYP5** (Grade 10): 51/56 Final Grade
- **Testing:** SAT 1540 [800 Math] | DELE A2 Spanish | IELTS 8.0

RESEARCH & PUBLICATIONS

The Rise of Digital Trading: Accessibility vs. Risk of Financial Ruin

Published June 2026

International Journal of High School Research (peer-reviewed)

- Investigated whether frictionless retail apps (Robinhood, Groww, Zerodha) democratize investing or amplify ruin; grounded 4 thematic literature findings (OECD, FINRA, CFA Institute, Amundi) in the 2021 GameStop short squeeze and Sky Capital scam case studies.
- Surfaced SEBI data showing 90% of Indian retail derivatives traders and 93% of new F&O entrants (2021 to 2024) posted net losses; argued the literacy gap, not platform design, drives the harm.

F1 Car on a Ceiling: Aerodynamic Feasibility of Inverted Ground-Effect Operation

2026

Independent side-project, hosted on Netlify, linked from adidevpanday.com

- Modeled a 2022 to 2025 ground-effect Formula 1 car in Python using the standard aerodynamic equation and a power-law ride-height response fit to Zerihaan and Zhang wind-tunnel data; wrote, debugged, and plotted all simulations.
- Partitioned the loose claim “could drive upside down” into 3 falsifiable tests (stick, drive, survive); corrected the widely cited 174 km/h figure by accounting for 11.5 mm suspension droop under inversion, yielding a true driving speed of **208 km/h** and a 327 km/h stability ceiling tied to the 2022 porpoising instability.

Finding the Nash Equilibrium for 4th Down Conversions (*Mathematics AA HL Extended Essay*)

2026

- Built a Mixed Strategy Nash Equilibrium model locating the mathematical tipping point between punting and attempting a 4th down, conditioned on field position and win probability (~4,000 words).

Analysis of Paper Plane Wing Surface Area vs. Time of Flight (*Physics HL Internal Assessment*)

2026

- Controlled-release flight trials isolating wing area as the independent variable; derived relationship between planform geometry and glide duration (~3,000 words).

Farmer Union Mobilization & Agricultural Policy Outcomes in India (2020 to 2023) (*Global Politics IA*)

2026

- Assessed the extent to which collective mobilization of Punjab farmer unions shaped national agricultural policy outcomes (~3,000 words).

ENGINEERING & SOFTWARE PROJECTS

AirflowNS, Founder & Developer (*airflowns.netlify.app*)

2026

- Built an in-browser 2D Navier-Stokes fluid-flow simulator with a stable-fluids solver, adjustable obstacles, Reynolds-number control, and real-time velocity and pressure field visualisation.
- Pitched to 5+ Woodstock Physics and Design teachers for classroom adoption as a visualisation aid for fluid-dynamics instruction.

DriveSafe, Founder & Developer

2026

- Prototyped a React Native and Firebase app targeting teen drunk driving in Ludhiana: dual role flow (rider / designated driver), OTP authentication, real-time ride dispatch, UPI payments.
- Shelved at prototype after regulatory and insurance complications; carried the full product cycle from problem interview to working build.

WoodLink, Lead Developer (*Computer Science HL IA*)

2026

- Designed and shipped a web platform connecting Woodstock current students with alumni mentors; delivered to a real client stakeholder with search, directory, and messaging layers.

Pole Island Sky Viewer (*StarsInMaine, built for Alan Lightman*)

2026

- Recreated the night sky from Alan Lightman’s *Searching for Stars on an Island in Maine* as an interactive web artifact; shared with Lightman as part of a recommendation-letter conversation.

Earlier web projects: GrowwBot, Balancify, NYT Puzzle Answers

2024 to 2026

- **GrowwBot** (2024, MYP5 Personal Project), AI investment and finance advisor; **Balancify** (2025, MYP5 Design), AI daily-timetable builder; **NYT Puzzle Answers** (2026), auto-updating Wordle, Connections, Spelling Bee answers via public GitHub repos.

INTERNSHIPS

BAUM (India), CAD Design Intern

Summer 2025

- Learned CAD fundamentals and their role across the industrial product design pipeline; produced parts under supervising engineers in a professional studio.

Zühne (Singapore), Marketing Intern

Summer 2025

- Delivered an AI marketing toolkit (video generators, campaign-copy workflows) that the company now uses for ongoing campaigns.

KGOC (India), Product Development Intern

Summer 2025

- Traced the full product development lifecycle, from initial concept to finished retail product, across a 2-week placement.

Woodstock Internships

2022 to Present

- Estates Head Intern; Alumni, AV, Communications, & Community-Engagement Intern

LEADERSHIP

Yearbook, Editor in Chief and Communications Intern

2024 to Present

- Designed 50+ pages and own layout, editing, and visual direction for the Woodstock yearbook; shoot and film content across campus for the yearbook and school social accounts.

AI Club, Co-Founder and Lead

2024 to Present

- Co-founded and run Woodstock's first AI club; teach 10+ students Claude Code, Codex, Gemini, Lovable, and applied prompt engineering through weekly sessions.

National Honor Society, Member

2025 to Present

- Organized 20+ community events serving staff and students, including Independence Day programming.

Academic Honesty Committee, Member

2024 to Present

- Conducted infraction hearings for 30+ students and set appropriate consequences; organized INIA, a country-wide academic-integrity webinar with 80+ students from 5+ schools.

Audio Visual Crew, Senior Intern

2023 to 2025

- Ran lighting and sound production for 50+ school events; trained and shift-led junior crew.

HONORS, AWARDS & SELECTIVE PROGRAMS

- **NUS Science Summer Camp** (National University of Singapore, 2025): competitive 5-day residential at NUS Kent Ridge; university-level lectures, labs, and guided research with NUS faculty.
- **Model UN**: 3rd Place as UK delegate in DISEC at Delhi Harvard MUN 2024; represented Sweden in C34 Peacekeeping at NHSMUN.
- **Claude certifications** (2026): AI Fluency Framework & Foundations (9/10), Claude 101, Claude Code in Action, Subagents, Cowork; Building with Claude API (in progress).

COMMUNITY SERVICE

- **Kimoi Fencing Project** (2025 to Present): fundraised INR 70,000 and led construction of metal fencing across a farmer's land in rural Mussoorie.
- **Service Learning Day** (2024, Woodstock): coordinated 210 students across 20 groups for inclusive activities with underprivileged children; painted educational murals at Kaplani Government School.

ATHLETICS & OUTDOOR

- **Varsity Football, Goalkeeper and Defender** (2022 to 2026): 7+ tournaments, 25+ matches, contributed to 18+ wins.
- **Varsity Basketball, Shooting Guard** (2023 to 2026): 4+ tournaments, 20+ matches, 11+ wins; 1st at THS Regional Tournament; selected for the Winmumby Tournament.
- **Track & Field** (2024 to Present): 3+ tournaments, 12+ events; 3+ gold, 3+ silver, 4+ bronze.
- **Outdoor Education** (2021 to Present): certified Leave No Trace hiker; certified in Wilderness First Aid, Epi-Pen, Adult & Child CPR; hiked 3 level 4 peaks and had a week-long cycling expedition across the Himalayas.

ARTS, SKILLS & LANGUAGES

- **Violin, 1st Chair of Woodstock Advanced Orchestra** (2021 to Present): ABRSM Level 5 to 7 repertoire across 7 school concerts; completing ABRSM Level 2.
- **Technical**: Python, JavaScript, HTML / CSS, Firebase, Git, Netlify; CAD; Claude Code, Codex, Gemini, Lovable.
- **Languages**: English, Hindi (both native), Spanish (5+ Years of Schooling), Punjabi (spoken), P-Language (fluent).