

Shrigopal Maheshwari

Bhopal, India • shrigopal1701@gmail.com • www.shrigopal.in • YouTube: @ShrigopalMaheshwari1

Student Innovator | AI + Robotics | Assistive Tech | Sustainability

EDUCATION

GVN The Global School, Bhopal — PCM + English

2024–2026

- Rank 1/200; Academic Excellence Award
- Head Boy; Founder, Robotics Club; President, Maths & Science Club

Sardar Patel Public School, Bhopal — STEM Track

2022–2024

- Distinction in all major subjects

RESEARCH WORK

Puma-TRACE-Net — AI Cybersecurity Research Paper (Co-Author)

- Paper accepted at the Springer International Conference on “The AI Spectrum”
- Developed a machine learning model to detect rare cyberattacks with 99% accuracy.
- Built and ran experiments; optimized performance; executed testing and evaluation workflows.

PUBLICATIONS

Sahaya: Reimagining Elder Care in the Age of AI — Author

- Explored how AI can enhance dignity and safety in senior care.
- Student-led work shaped by real caregiving experience and community fieldwork.
- ISBN: 978-93-93433-57-2

PROJECTS & INNOVATION

Companion App — Developer & Co-Founder

- Built an AI assistant for dementia patients: reminders, memory support, and conversation.
- Implemented custom emotional responses using prompt engineering.
- Deployed in elderly homes in Bhopal, supporting 200+ seniors and caregivers.

Dementia Community Initiative — Founder

- Built caregiver + doctor networks across Bhopal; conducted dementia awareness sessions.
- Integrated the Companion App into community support to improve continuity of care.

ForestFlyer & EcoSentry (Patent Filed)

- Designed a drone system for reforestation and precision farming.
- GPS-guided seed dispersal for forest-burn zones; solar-assisted concept.
- AI-based leaf-disease and pest detection to reduce pesticide waste.

Smart Saathi — AI Smart Walking Stick (Patent Filed)

- Developed a stigma-free smart cane using direct user feedback from elderly patients.
- Features: obstacle detection, gait tracking, fall prediction AI, and caregiver alerts.

CO-Sentry — Low-Cost CO Detector (~\$3)

- Built with MQ-7 sensor + Arduino to prevent gas poisoning in rural homes.
- Demonstrated in villages and schools.

FluencyBuddy — AI English Speaking Trainer

- Created a live conversation practice tool with instant AI feedback.
- Adopted by juniors at school for speaking improvement.

Robotics Club Projects — Founder & Leader

- Built and taught: line-following robot, obstacle avoidance bot, gesture-controlled bot.
- Led Arduino + sensor tutorials; assembled competition-ready robotics kits.

EchoBreaker — Chrome Extension

- Surfaces opposing viewpoints for any news article to reduce echo-chamber effects.
- Encourages balanced decision-making through comparative perspectives.

SmartPlate AI — License Plate Verification System

- Detects fake number plates; supports India's HSRP mandate.
- Recognized by Bhopal Traffic Police and IG Police.

Water Quality Monitoring System

- Built a real-time water quality system measuring pH, turbidity, and TDS system.
- Added IoT connectivity for continuous remote monitoring and environmental reporting.

LEADERSHIP

Head Boy — GVN The Global School (11th-12th)

- Led assemblies, discipline, events, and student government; mentored juniors.
- Represented school at public functions.

Founder — Robotics Club

- Established a robotics culture; trained 50+ students in robotics and electronics.
- Organized inter-school competitions and hands-on workshops.

President — Maths & Science Club (9th-12th)

- Led STEM workshops and science fairs; mentored juniors in project building.

Student Coordinator — Environmental Initiatives (9th-12th)

- Led plantation drives, water conservation campaigns, and campus clean-up events.

Team Lead — Technical Programs

- Led cross-functional build teams: AI Companion, Drone Development, CO-Sentry, Smart Saathi.

COMMUNITY SERVICE

NGO & School Outreach — Tutor & Lead Volunteer

- STEM tutor for village children; distributed textbooks, clothes, and eco-stoves.
- Installed CO detectors in low-income communities.

Environmental Sustainability Team Lead

- Led plantation of 300+ saplings; organized water conservation events.
- Drove a zero-plastic campus movement.

WORK EXPERIENCE

Satyam Motors (Maruti Suzuki) — Environmental Sustainability Intern

- Supported setup of an Effluent Treatment Plant (ETP).
- Coordinated vendors, documentation, and certifications.
- Assisted in obtaining Air & Water Act approvals from the State Pollution Control Board.

Globus Group of Colleges — Fundraising & Outreach Intern

- Led a fundraising project raising ₹5,00,000 to support underprivileged students.
- Organized outreach events and coordinated volunteer teams.

AWARDS & HONORS

- Best NSS Volunteer Award (4 years)
- Academic Excellence Award — Rank 1
- Maker Cup — Mathematics & English
- Perfect Attendance Award (4 years)
- District Science Fair Recognition
- School Innovation Awards (Robotics & AI Projects)

TECHNICAL SKILLS

Programming/AI: Python • C++ • Machine Learning • TensorFlow • OpenCV

Hardware/Robotics: Arduino • IoT • Sensors • Embedded Systems • Microcontrollers • Robotics

Tools: Arduino IDE • GitHub • Chrome Extensions • SolidWorks (Basic)

Additional: Prompt Engineering • Product Prototyping • Community Engagement • Public Speaking