

Aditya Pandya

Hardware and IOT Researcher

LinkedIn: www.linkedin.com/in/adiastron

Email: founder.astron@gmail.com

Phone: +91 8866906610

PROFESSIONAL SUMMARY

Engineer and analog astronaut specializing in IoT architecture, embedded systems, and applied AI, building mission-ready, real-world solutions. Recognized at state and national levels for leadership in STEM innovation and technology-driven impact.

TECHNICAL SKILLS

IoT & Hardware Systems

Achieved ~95% system uptime and 66% faster anomaly response in mission-simulated environments by designing multi-sensor IoT architectures integrating I2C/SPI/UART communication and real-time data logging frameworks.

GitHub: <https://github.com/aditya-astron/Mission-Grade-IOT-Architecture>

Satellite Communication & Long-Range Telemetry Systems

Achieved **94% link reliability** in simulated LEO telemetry and 10+ km terrestrial data relay by designing a hybrid long-range communication architecture integrating **LoRa (868/915 MHz) with adaptive spreading factors and forward error correction**, augmented by laser-optical transmission principles for potential **100x+ data rate scalability**, enabling secure, interference-resistant mission-critical telemetry in launch and habitat environments.

GitHub: <https://github.com/aditya-astron/hybrid-lora-laser-telemetry-system>

Artificial Intelligence & Problem Solving

Increased decision accuracy by 45% and reduced manual analysis time by 32% by developing AI-assisted optimization scripts, anomaly detection models, and structured generative-AI prompt workflows for real-world deployment.

GitHub: <https://github.com/aditya-astron/AI-iot-habitat-monitoring>

Additional Skills

Improved operational execution efficiency by **28%** across **28+ technical programs** by applying structured design thinking, workflow optimization, and documentation-driven execution strategies, while enhancing system planning clarity by **78%** through CAD-based conceptual modeling, habitat visualization, structured system diagrams, and detailed product documentation for sensor-driven and mission-oriented environments.

WORK EXPERIENCE

IoT & Sensor Systems Developer – AAKA Space (ISRO affiliated Space Tutor).

(Aug 2025-Present)

Engineered and deployed a multi-sensor IoT habitat monitoring system tracking 6+ environmental parameters, improving anomaly detection speed by 45% and maintaining ~95% system uptime during analog mission simulations, by integrating ESP-based embedded architecture, automated threshold alerts, and modular hardware-software validation protocols.

Founder – IDEN Smart Student Identity Platform

(Sep 2025-Present)

Built and deployed a secure digital identity system managing 1,000+ student records, reducing manual verification time by 70% and administrative workload by 60%, by architecting role-based access control, automated authentication workflows, and scalable database infrastructure.

Founder – Innogine (Skill-Based Education Platform)

(Jan 2023- Sep 2025)

Impacted 3,000+ students across 20+ STEM and entrepreneurship programs, increasing hands-on engagement rates by 65% and achieving a 30% repeat participation rate, by designing project-based learning modules and structured institutional execution frameworks.

Volunteer – Blind People's Association, Ahmedabad

(Nov 2022- Jul 2024)

Developed a real-time ultrasonic navigation prototype achieving 95% obstacle detection accuracy and reducing controlled-environment collision risk by 63%, by implementing embedded C-based sensor logic, calibrated feedback thresholds, and conducting 15+ iterative user testing cycles.

AEROSPACE & ANALOG ASTRONAUT

Selected as India's youngest male analog astronaut, completing 160+ hours in simulated isolation missions while maintaining 100% protocol compliance and ~95% habitat system uptime, by designing and operating a multi-sensor analog habitat with 5+ integrated environmental systems.

Enhanced environmental response efficiency by 40% and improved system monitoring accuracy by 73% by logging and reviewing 15,000+ mission data points and conducting structured observations on system reliability and human performance under confined conditions.

Article link:

<https://www.aninews.in/news/business/17-year-old-aditya-pandya-becomes-indias-youngest-male-analog-astronaut-after-completing-aa-ka-spaces-lunar-habitat-mission20260209150455/>

<https://timesofindia.indiatimes.com/science/meet-aditya-pandya-17-year-old-becomes-indias-youngest-analogue-astronaut-who-lived-de-signed-and-tested-a-moon-like-habitat/articleshow/128305515.cms>

PUBLICATIONS

- **Quantum Diaries** – Explores the nature of reality through physics, astronomy, and philosophy
<https://amzn.in/d/0ffS2CfK>
- **Quantum Physics Explained Without the Headache** – Beginner-friendly explanation of quantum physics concepts
<https://amzn.in/d/0ht26MWc>

MEDIA & OUTREACH

Built a science communication platform reaching 10,000+ followers(Instagram), achieving average engagement rates of 8–12% per post.

Generated 100,000+ cumulative content impressions through structured educational storytelling.

Delivered astronomy and STEM sessions to 25+ institutions, increasing student inquiry participation by 86%.

Link: https://www.instagram.com/adi_astron/

RECOGNITIONS

- Recognized by the **Prime Minister of India**, For perspectives on **education system reform in India**.
- Awarded by the **Governor of Gujarat** for contributions to astronomy and outreach.
- Awarded by the **Chief Minister of Gujarat** for innovation and educational impact.

EDUCATION

- **Institute of Advanced Research (IAR), Gandhinagar**

Bachelor of Technology (B.Tech) – Computer Engineering

Specialization: Artificial Intelligence

Year: Second Year (Ongoing)

- **IIM Mumbai & MIT Data Science Lab (2025)**

Certified at Generative AI for Data-Driven Business Decision-Making

- 32-hour certification aligned with PM GatiShakti and Viksit Bharat
- Focused on strategic application of Generative AI in business ecosystems