ADARSHA RAJ BHUSAL

UAV SYSTEMS ENGINEER // FOUNDER, GARUDX

adarsharajbhusal.com | Contact through the website
garudx.com | GarudX Showreel | LinkedIn

TECHNICAL SKILLS

UAV & CAD Design

- Fusion 360
- Structural & flight simulation
- Carbon-fiber/composite prototyping
- 3D printing, CNC, laser cutting

Flight Systems

- ArduPilot / Pixhawk, MAVLink
- Flight-controller & companion-computer architecture
- RTK/PPK GPS, gimbal & payload integration
- Power-system & battery engineering

Software

- Python, OpenCV, YOLO, PaddleOCR
- Embedded Linux (Raspberry Pi)
- CV pipelines: ANPR, crowd counting, traffic analysis

Creative

- 3D modeling & VFX (Blender)
- Aerial cinematography

EDUCATION

BSc (Hons), Computing

Islington College, Kathmandu

+2, Science (Computer / Mathematics)

CG Education Campion College, Kathmandu

RECOGNITION

- Winner, U.S.-Nepal Startup Weekend Challenge — *U.S. Embassy Nepal, Feb 2026*
- 1st Runner-up, 5th NYEF Startup Awards — *June 2026*

CREDENTIALS

- Registered under Nepal's Company Act
- Drone-training trainer certification, Nepal Film Development Board

PROFILE

Building and flying drones since age 12; now leads UAV product development as founder of GarudX, which designs and builds its own UAVs in Nepal. Owns programs end-to-end: CAD design, structural and flight-test validation, embedded software, computer vision, and manufacturing, from government contract delivery to high-altitude field testing and international commissioned projects.

EXPERIENCE

Founder, UAV Systems Engineer, GarudX Multipurpose Pvt. Ltd., Lalitpur, Nepal
2018 – Present

- Founded GarudX as an independent social-media project; incorporated as a private limited company in 2024. Now leads a 15-person engineering and manufacturing team that has developed 9 original UAV platforms in-house.
- Led the SkyReaper multirotor UAV program end-to-end: secured and managed the Nepal Police contract, led procurement, designed the airframe in Fusion 360, ran structural and flight testing, and delivered the system with operator training.
- Directed development of the GX8 Pyro heavy-lift cinema UAV: 12 kg payload capacity (RED camera + gimbal), speeds up to 210 km/h.
- Delivered mission-specific platforms to Nepal Police: a search-and-rescue aerial supply-drop drone, and a SkyReaper-based surveillance suite (automatic number-plate recognition, crowd counting, and traffic analysis).
- Designed the flight-controller and companion-computer architecture used across the product line for onboard computer-vision and autonomy workloads.
- Field-tested GarudX airframes and battery/propulsion systems at high altitude, characterizing how propeller pitch, motor KV, and battery chemistry perform across altitude bands to inform future high-altitude UAV design.
- Climbed to about 6,200 m on Lobuche East with the EliteExpeed expedition to conduct this testing directly in extreme high-altitude flight conditions.
- Served as Technical Partner for the FPV drone racing department at TechnoXian (India); separately founded and leads the Nepal Drone Racing League (NDRL), a professional FPV racing league.
- Presented a similar drone-racing/ecosystem model to Oman's Ministry of Sports & Youth Affairs in Muscat, proposing FPV racing as a tourism initiative and national drone-ecosystem driver.
- Built the client base from zero to recurring contracts across national government, law enforcement, and commercial production sectors.

Freelance FPV Pilot & 3D/VFX Artist, Nepal & International
Concurrent with GarudX

- 150+ commissioned drone and VFX productions across Nepal, India, the UAE, and China, including 17+ feature films and 200+ commercials, music videos, and documentaries.