



NeuroFlight

NeuroFlight Lab

Official Organization Documentation

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Prepared for Public Reference

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MISSION STATEMENT

“To advance interdisciplinary research and innovation at the intersection of AI, robotics, biotechnology, and software systems — empowering intelligent, sustainable, and human-centered solutions through collaboration, education, and real-world impact.”

VISION

To become a globally recognized hub for AI-driven interdisciplinary innovation — bridging academia, industry, and society to solve complex challenges in health, environment, automation, and digital transformation.

CORE VALUES

Value Description

Innovation Pushing boundaries with bold, creative, and practical solutions.

Collaboration Enabling teamwork across diverse disciplines and institutions.

Integrity Promoting transparency, ethics, and accountability.

Impact Driving real-world outcomes that benefit humanity and the planet.

Value Description

Excellence	Maintaining the highest standards in research and education.
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ORGANIZATIONAL STRUCTURE

Leadership & Governance

-  **Principal Investigator:** Prof. Dr. Dip Nandi
-  **Scientific Advisor (Biotech):** Prof. Dr. Md. Imtiaz Uddin
-  **Director & Lead Researcher:** S.M. Tawhid

Departments

Department	Lead	Focus Areas
Biomechatronics & Robotics	Dr. Debajyoti Karmaker	Autonomous systems, bio-inspired robots, human-robot interaction
Machine Learning & Computer Vision	—	Deep learning, visual AI, predictive modeling
Biotechnology & Plant Breeding	Prof. Dr. Md. Imtiaz Uddin	Genetic engineering, climate-resilient crops, bioinformatics
Software Development	—	Full-stack systems, AI platforms, open-source tools

RESEARCH & INNOVATION PILLARS

 Pillar	 Objective	 Example Projects
AI-Powered Robotics	Develop adaptive, safe, and intelligent robotic systems	NeuroFlight Drone Swarm, Soft Robotics for Rehabilitation
Biotech for Sustainability	Engineer biological systems for food security & health	CRISPR-based drought-resistant rice, Microbial fuel cells
Intelligent Software	Build scalable, secure, and	NeuroFlight Soft (AI framework)

 Pillar	 Objective	 Example Projects
Systems	user-centric AI platforms	
Interdisciplinary Integration	Combine AI + Biotech + Robotics	Bio-hybrid drones for precision agriculture

KEY ACTIVITIES

1.  Research Projects – Peer-reviewed studies, prototypes, and publications
 2.  Software Development – Open-source and production-grade AI systems
 3.  Workshops & Training – AI, robotics, and biotech bootcamps
 4.  Industry Collaboration – Tech firm and NGO partnerships
 5.  Student Mentorship – Thesis supervision and internships
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TEAM DIRECTORY (Nov 2025)

 Name	Role	Affiliation	Expertise
Prof. Dr. Dip Nandi	Principal Investigator	Associate Dean, FST, AIUB	AI, Robotics, Education
Prof. Dr. Md. Imtiaz Uddin	Scientist (Biotech)	Universiti Malaya	Plant Biotech, Genetics
S.M. Tawhid	Director & Lead Researcher	INTI International University	Biomechatronics, Robotics, AI Systems
Kazi Tanzizul Haque	Co-Lead Researcher	D2A2I, AIUB	ML, Computer Vision
Abdul Kader Mohim	Researcher	D2A2I, AIUB	Embedded Systems
Sk. Shahed Ali	Researcher	AAIRL, AIUB	AI Ethics, NLP
Yash Rohan	Lead Developer	NeuroFlight Lab	Full-Stack, DevOps

 Name	Role	Affiliation	Expertise
Shuva Saha	Research Associate	AIUB	Data Science
Mohammad Tanvir	Research Assistant	Woosong University	Robotics Engineering
Sunipun Seemanta	Research Assistant	Ecodev Solutions	Data Analytics
Shahriar Hossain Jayed	Admin & Operations	AIUB	Project Management
Mahodi Al Kadir Zahin	Frontend Developer Intern	AIUB	UI/UX, React
Arpon Paul Amit	Research Intern	AIUB	Artificial Intelligence

INFRASTRUCTURE & TOOLS

 **Labs:** Controlled Avian Environment, Wet Lab

 **Compute:** NVIDIA RTX A6000 ×4 GPU Cluster, AWS/Google Cloud Credits

Software Stack:

- Python, PyTorch, TensorFlow, ROS2
- Docker, Kubernetes, GitHub Actions
- Unity / Unreal Engine
- Next.js, Tailwind CSS

 **Collaboration Tools:** Slack, Notion, GitHub, Zotero

POLICIES & GUIDELINES

Code of Conduct

- Respect intellectual property and acknowledge contributions.
- Follow ethical AI and biotech research practices.
- Maintain strict data privacy and security.
- Promote open-source collaboration.

Publication Policy

- Target peer-reviewed journals and conferences.
- Prefer open-access and preprints (arXiv).
- Internal review before submission.

Software Release Policy

- License under **MIT or Apache 2.0**.
 - Maintain version control (Git).
 - Use CI/CD for all production-level tools.
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CONTACT & COMMUNICATION

 Email: info@neuroflightlab.org

 Website: www.neuroflightlab.org

 LinkedIn: linkedin.com/company/neuroflightlab

 Location: Mirpur-10, Dhaka, Bangladesh

FUTURE ROADMAP (2025-2027)

Year Milestone

2025 Launch *NeuroFlight Soft v1.0*, Publish 4 papers, Host 2 workshops

2026 Secure 3 industry grants, Release open-source CV toolkit, Expand to 50+ members

2027 Establish Semiconductor Lab (Malaysia/Netherlands), File 1 patent

APPROVAL

Signed:

Prof. Dr. Dip Nandi

Principal Investigator, *NeuroFlight Lab*

Signed:

S.M. Tawhid

Director & Lead Researcher, *NeuroFlight Lab*

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