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# Kalyan Kanti Halder

AI Engineer, Full Stack Developer  
ML Researcher, Creative Technologist

Portfolio: KalyanKantiHalder

github.com/Kalyan-Halder

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I am a committed and research-focused computer graduate with strong academic performance and hands-on skills in AI, machine learning, software development, and networking. I've demonstrated research ability through multiple IEEE-accepted publications in deepfake detection and neural-network optimization. Experienced in one-on-one academic tutoring for secondary and higher secondary students and mentoring during university, with a talent for simplifying complex technical concepts. Skilled in full-stack development, cybersecurity, multimedia tools, and practical DIY projects, reflecting a well-rounded, creative, and applied approach to engineering education. Eager to inspire students, contribute to curriculum development, and foster practical learning environments.

## EDUCATION

### Bachelor of Science in Computer Science and Engineering

Patuakhali Science and Technology University

2025

CGPA : 3.605

### Higher Secondary Certificate

Notre Dame College, Dhaka

2019

GPA : 4.83

### Secondary School Certificate

Udayan Secondary School, Barishal

2017

GPA : 5.00

## RESEARCH

### 1. Efficient Motion-Based Prefiltering for Real-Time Video Classification on Edge Devices

2025 IEEE CS BDC Symposium, HSTU, Dinajpur

July 18-19, 2025

Status: Accepted and Presented

### 2. Audio-Driven Landmark Regression (ALDR): A Multi-Task Transformer Framework for Explainable Lip-Sync Deepfake Detection

2025 4th IEEE International Conference on Robotics, Automation, Artificial Intelligence, and Internet-of-Things(RAAICON)

Nov

27-28, 2025

Status: Accepted and Presented

### 3. Adaptive Modality Gating: Explainable, Confidence-Guided Fusion for Source-Only Zero-Shot Deepfake Detection

2026 28th IEEE International Conference on Computer and Information Technology (ICCIIT)

Dec 19-21, 2026

Status: Accepted and Presented

### 4. Architectural Insights for Neural Network-Based RIS Optimization: A Systematic Study of Deep Learning Models for Phase Shift Configuration Under Imperfect Channel Condition

2026 5th International Conference on Electrical, Computer and Telecommunication Engineering (ICECTE)

Jan 29-31, 2026

Status: Accepted and Presented

### 5. 3D Self-Supervised Pre-Training and 3D-to-2D Transfer Learning for Brain Tumor MRI Classification

2026 5th International Conference on Electrical, Computer and Telecommunication Engineering (ICECTE)

Jan 29-31, 2026

Status: Accepted and Presented

## TEACHING & MENTORING EXPERIENCE

- Provided one-on-one academic tutoring to secondary and higher secondary students in Mathematics, Physics, and Computer Science.
- Mentored university peers in programming fundamentals, AI/ML project development, and research methodology.
- Designed and delivered simplified learning materials and workshops on complex topics such as neural networks, web development, and data structures.
- Facilitated hands-on coding sessions and project guidance, fostering practical understanding and problem-solving skills.

## PROJECTS

**Shatter Sphere** – A photo-sharing platform built with Next.js, Node.js, Express.js, and MongoDB.

**Bank Application** – A simulation of day-to-day banking transactions using Java and MySQL.

**Role-Based Access Control** – A role-based access control system with admin email invite.

**Expense Tracker** – This is a full-stack Expense Tracker application built with React, FastAPI + PostgreSQL.

**Blog Website** – A blog post sharing platform developed with HTML, CSS, JS, PHP and MySQL.

**Agro-Market Manager** – A versatile marketplace with administrative price controls, built with Flutter, Dart, Node.js, and MongoDB.

## COURSES

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Cyber Threats and Attack Vectors	Coursera, University of Colorado
C for Everyone: Programming Fundamentals	Coursera, University of CALIFORNIA
Technical Support Fundamental	Coursera, Google
Web Design and Development (WDD)	Learning and Earning Development Project By ICT Div.
Skill Development for Mobile Game and Application Project	ICT Division
Certificate of Achievement, Bangladesh Physics Olympiad	2018

## SKILLS

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<b>Programming Languages</b>	Python, Git, $\text{\LaTeX}$ , Java, C, C++, JavaScript, Dart
<b>Web Development</b>	HTML, CSS, React.js, Express.js, Nodejs, FastAPI
<b>Databases</b>	MongoDB, MySQL, PostgreSQL
<b>Networking</b>	Cisco Packet Tracer, Dynamic Routing (RIP, OSPF, EIGRP), Networking Simulation and Design
<b>System &amp; Tools</b>	Docker, Linux (Ubuntu, Kali)
<b>Research &amp; Development</b>	AI/ML, Deep Learning, Computer Vision

## REFERENCES

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### Dr. Md Abdul Masud

Professor

Department of Computer Science and Information Technology (CSIT)

Faculty of Computer Science and Engineering

Patuakhali Science and Technology University

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