Project Proposal Form
Institute of Information Technology (IIT)
University of Dhaka

Student's Name:	**Mahir Faisal**		
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Project Description (with in 200 words) :

Real-Time Dual-Lens Photo Enhancer

When we take an ultra-wide photo, we capture a large area, but the image looks blurry, distorted, or less detailed. In contrast, a telephoto image gives clear & sharp details, but only for a narrower portion of the scene. It captures the textures and edges beautifully, but it fails to represent the broader scene and misses the spatial context that the wide lens provides.

This creates a fundamental limitation in modern photography: one lens offers **context without clarity**, and the other offers **clarity without context**. When users switch between lenses, they're forced to sacrifice either the breadth of the view or the richness of detail. This challenge becomes even more critical in fields like surveillance, autonomous driving, and professional imaging, where both wide perspective and fine detail are equally essential.

My project aims to remove this trade-off, the gap between wide beauty and sharp precision in photography. Imagine capturing a landscape photo, the vast sky, distant mountains, and every small leaf in perfect harmony, all in a single shot. That's exactly what this project makes possible.

I will develop a system that merges the ultra-wide and telephoto images to create a single, enhanced photo. By using this project, one that keeps the wide view of the ultra-wide image and the sharp clarity of the telephoto shot. The result is a balanced, high-quality image that looks natural and detailed across the entire frame.

This project turns ordinary dual-lens cameras into smart storytellers, capable of producing images that truly capture how our eyes see the world: broad, detailed, and beautifully real.

Tools & Technologies

Tools	Technologies
Language	Python
DL Framework	PyTorch
Model Architecture Components	Lightweight DL models
Dataset	CameraFusion dataset
Environmet	Jupyter Notebook/VS Code, GPU server (if possible)
Image Processing Libraries	OpenCV, NumPy, and Pillow (PIL)
Visualization & Analysis	Matplotlib
Version Control	Github

Deadline

Deadline	Before the end of the Semester

Supervisor's Name:____Dr. B M Mainul Hossain_____ **Signature of the supervisor:_____** **Date:_____11/06/2025_____**
Proposal Presentation Feedback:
Midterm Presentation Feedback: