Proposal for AI-Powered Military Security Gate

This proposal outlines the implementation of a state-of-the-art AI-powered security gate system, integrating facial recognition, RFID-based vehicle authentication, and long-range wireless data transmission. The solution is designed for a military-grade security environment, ensuring high accuracy, efficiency, and secure access control. The project includes both hardware deployment and software services, along with full installation, fitting, and configuration.

1. Hardware Procurement & Deployment

Component	Qty	Unit Price	Total Price
NVIDIA Jetson Orin Nano 8GB (AI Processing Unit)	1	INR 60,000	INR 60,000
Customized Logical PCB for AI System	1	INR 60,000	INR 60,000
1TB NVMe SSD (High-Speed Storage)	1	INR 12,000	INR 12,000
4K AI IP Cameras (Night Vision) for Face Recognition	4	INR 12,000	INR 48,000
Industrial UHF RFID System for Car Authentication	1	INR 20,000	INR 20,000
TP-Link CPE520 (20km Wireless PtP Bridge)	1	INR 9,000	INR 9,000
HP 15s-eq2144AU (Ryzen 5 5625U, 8GB RAM, 512GB SSD)	1	INR 55,000	INR 55,000
Total Hardware Cost			**INR 264,000**

2. AI Software Development & Service Costs

- Custom AI Face Recognition Model: Development & training of high-accuracy facial recognition AI.

- RFID-Based Vehicle Authentication: Integration of RFID-based secure vehicle access system.

- Secure Database & Backend System: Development of a secure backend for employee record management.

- Network Security & Encryption: Implementation of secure data transmission protocols (Reduced cost).

- Custom UI & Face Entry Software: Development of a user-friendly interface for managing personnel entry.

- Remote Office Registration System: Software for remote employee registration, syncing data with the gate.

Total Software Development & Service Cost	INR 225,000

3. Installation, Fitting & Deployment Costs

- Installation of TP-Link Towers: Secure mounting and alignment of PtP wireless bridges.

- Camera Enclosures & Mounting: Weatherproof enclosures and structured mounting for AI cameras.

- RFID System Assembly: Secure installation and alignment of RFID scanner & tag detection system.

- Custom PCB Assembly & Fitting: Integration of logical PCB and AI processing unit into secure housing.

- Network & Data Cabling: Structured cabling for secure and efficient system operation.

- Complete System Testing: Final calibration and performance validation of the entire setup.

Total Installation & Deployment Cost (Included)	**INR 0 (Included)**

4. Final Project Cost

Total Hardware Cost	**INR 264,000**
Total Software Development & Service Cost	**INR 225,000**
Installation & Deployment Cost	**INR 0 (Included)**
Final Total Cost	**INR 489,000**