Use Case: AI Powered Intrusion Detection Platform

Client

A Knowledge Process Outsourcing (KPO) company headquartered in India, catering to international clients primarily in the Banking, Financial Services, and Insurance (BFSI) as well as Taxation domains. The company specializes in back-office operations such as Insurance Claim document verification and Tax Refund Claims processing.

Business Problem

Working closely with prominent international BFSI firms, the client identified the need for enhanced security within their secured zones. While their existing security mechanisms, including Access Cards, Face Recognition, and Biometrics, were robust, the client aimed to further mitigate risks associated with unauthorized access and tailgating. They sought a cutting-edge security solution that could instantly detect and alert security personnel about unauthorized intrusions, ensuring swift action.

Solution

In response to the client's security needs, we proposed and developed an AI-Powered Intrusion Detection platform, leveraging Computer Vision and Face Recognition technologies for live CCTV camera feeds.

- Camera Optimization: After a thorough assessment of existing CCTV camera footage, we recommended strategic changes to camera positions, lighting conditions, and camera resolutions to optimize detection capabilities. The client implemented these changes as part of the solution.

- Custom Face Recognition Model: We trained a Face Recognition model tailored to the faces of authorized personnel. If an unrecognized individual attempted access, the model triggered an alert, capturing the person's image and a 10-second video clip as evidence.

- Alert Rendering and Management: The intrusion alerts, along with captured evidentiary materials, were presented on a dedicated platform accessible to security personnel. A manual override mechanism was included for situations requiring human intervention to prevent false positives.

- Periodic Training and Maintenance: The platform allowed for regular model updates to accommodate new employees or remove former employees' embeddings. This ensured the model remained accurate over time.

- High Accuracy Implementation: Our expertise in AI, Deep Learning, and Streaming Data Pipelines, coupled with our understanding of camera feeds, lighting conditions, and other variables, resulted in an exceptional model accuracy exceeding 98%.

Outcome

The adoption of the AI-Powered Intrusion Detection platform yielded remarkable outcomes for the client:

- Enhanced Security: The client achieved intrusion-free secured zones, bolstering their overall security infrastructure and minimizing the risk of unauthorized access.

- Drastic Reduction in Intrusion Incidents: Incidents of unauthorized access were reduced by nearly 99%, showcasing the effectiveness of the AI-powered solution in curbing security breaches.

- Regulatory Compliance and Avoidance of Penalties: By meeting stringent security compliance standards, the client not only safeguarded their operational integrity but also avoided potential penalties from their own clients.

Conclusion

The implementation of the AI-Powered Intrusion Detection platform significantly elevated the security posture of the KPO company's secured zones. With its ability to accurately identify unauthorized access attempts in real-time and provide actionable evidence, the platform empowered security teams to respond promptly to potential threats. Through this innovative solution, the client established a robust security framework that aligned with industry best practices, while also showcasing their commitment to maintaining a secure environment for their clients and employees.