

Isteyak Isteyak

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SKILLS

Programming Languages: Python, Java, C, C++. JavaScript, Rust

Frameworks and Technologies: Next.js, Supabase, MongoDB, Express, React, Node.js, Streamlit, OpenCV, TensorFlow, PyTorch, Keras, scikit-learn, FastAPI, Pandas, NumPy, GDAL, ArcGIS, bs4, Cohere, Docker, Colab, Kaggle, Linux, WSL, VS Code, Spyder, MediaPipe, Gemini API, ElevenLabs

EDUCATION

Bachelor of Computer Science Jan 2023-Dec 2024

University of Windsor | Windsor, ON

Transferred Credits from Independent University, Bangladesh (Jan 2021 – Aug 2022)

Earned Dean's Awards for Fall 2021 and Winter 2022.

EXPERIENCE

Researcher | GeoVision Lab | University of Windsor | Windsor, ON Feb 2025-Present

- Developed a patching system for creating splits of any satellite image and tested using QGIS render tech.
- Created a web scraping system to extract data in a structured way from database websites.
- **Trained a Siamese Attention-UNet model using TensorFlow/Keras on geospatial image pairs to detect visual similarity for change detection tasks.**
- **Optimized model training on limited GPU resources (NVIDIA GTX 1080) by tuning batch size, input resolution, and memory growth settings to avoid OOM errors during large-scale inference.**

Research Assistant | University of Windsor | Windsor, ON Oct 2024-Dec 2024

- Researched and **evaluated** frontal face detection techniques by integrating YOLOv8n with MTCNN and YOLO11 with RetinaFace, achieving improved **detecting** accuracy and frame-level face counts in **ML** experiments.
- Conducted performance benchmarking and model comparison to assess inference speed, **scalability**, and detection reliability for computer vision applications.
- Collaborated under the supervision of Dr. Ziad Kobti, Former President of the Canadian AI Association, contributing to **innovative approaches** and **automating development** workflows for experiments.

PROJECTS

AI-Powered 3D Virtual Classroom | HackTheNorth 2025 Sep 2025

- Contributed to building an immersive 3D classroom in Three.js with interactive areas for collaborative learning.
- Integrated Cohere's Command A Vision Model and latest LLM to process handwritten notes, achieving rapid LaTeX conversion and generating polished study materials in 3 seconds.

ESP32 Wireless Media Bridge (Edge File Transfer Middleware) Feb 2026

- Built an ESP32-based wireless middleware that enables direct photo and video transfer from a smartphone to a laptop using Wi-Fi AP mode and an embedded HTTP server.
- Implemented firmware in ESP-IDF focusing on networking, memory constraints, and reliable data streaming on resource-limited hardware.

Ultimate Posture Watcher | UOttahacks 2026 Jan 2026

- Built a privacy-first, real-time posture coach using webcam input, MediaPipe Pose (WASM), and ergonomic angle.
- Designed configurable alert system (beeps + cooldown logic) and session analytics (posture time, worst angles).

Global Electricity Resources Availability Web App | WinHacks 2024 Hackathon Feb 2024

- Assisted in API integration using React, Geocodify, and Electricity Map for real-time data visualization.
- Collaborated in a team of 4 to develop a resource solution, securing 3rd place in the competition.