

HUDA HALANI

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EDUCATION

University of Toronto

Bachelor of Applied Science in Computer Engineering, Minor in Artificial Intelligence

September 2023 – April 2027

Relevant Coursework

AI Fundamentals, Data Structures & Algorithms, Operating Systems, Embedded Systems, Software Design and Communications

TECHNICAL SKILLS

Languages: Python, C/C++, HTML/CSS, JavaScript, MATLAB, Nios-V Assembly, SQL, Embedded C, Bash/Shell

Technologies: React, Node.js, Git, Firebase, GCP, Vercel, OpenAI, PyTorch, TensorFlow, NumPy, Docker, Visual Studio

EXPERIENCE

Software Development Intern, *Unishippers*

June 2025 – August 2025

- Developed a **Python-based shipment tracking system** that reduced manual data entry by **85%** and increased reporting accuracy by **70%**, enabling logistics teams to resolve delivery issues faster.
- Engineered a web scraping pipeline for **6 major carriers**, automating the tracking of **100+ shipments daily**; eliminated repetitive work and delivered real-time shipment visibility, saving operations staff **5+ hours every week**.
- Automated email reporting, replacing **20+ manual emails/week** and improving report accuracy by **10%**.

Web Developer, *You're Next Career Network*

April 2025 – August 2025

- Designed an interactive website leaderboard using **React, Firebase, and CSS** to encourage student engagement and collaboration, increasing participation in campus recruiting events by **20%**.
- Implemented advanced search, sorting, and color-coded attendance tracking features, reducing data lookup time by **50%** and making event insights significantly more accessible for students and organizers.
- Optimized backend **SQL queries** powering the leaderboard system, enabling smooth real-time updates for **1000+ students**, while scaling platform performance effectively during peak recruiting season.

Software Engineering Fellow, *Headstarter AI*

June 2024 – August 2024

- Published a personal portfolio website using **HTML/CSS**, showcasing **15+ projects**, attracting **1500+** site visits.
- Developed a "Rate my Professor" interface and custom flashcard generator with **OpenAI API**, engaging **30+ students**.
- Engineered a Universities Information chatbot, helping **over 20** high school students choose between **10+** universities.

PROJECTS

AI-Powered Offline Trauma Training App | React Native, TensorFlow Lite

- Founded **Train2Heal**, a bilingual AI mobile platform built with **React Native** and **TensorFlow Lite**, delivering offline trauma training and real-time wound diagnostics through **AR-guided procedures** and hands-free voice commands.
- Achieved **70% faster skill acquisition** while enabling treatment guidance for **20+ trauma conditions** with **under 3-second response time**, making life-saving medical training scalable and accessible for frontline responders.

Skin Lesion Classification | PyTorch, EfficientNet, Github

- Led a team to develop an end-to-end ML pipeline for **skin lesion classification** on **ISIC 2019 (25K+ dermoscopic images)**, with preprocessing, augmentation, and class imbalance handling via **weighted loss** and **oversampling**.
- Fine-tuned **EfficientNet-B2** with transfer learning, mixed precision training, and learning rate scheduling, achieving **81% accuracy** and **0.82 macro F1**, a **+20%** lift over baseline **SVM + ResNet-18**.
- Evaluated cross-domain generalization on **PAD-UFES-20 smartphone dataset** achieving **75% accuracy**.

Interactive Navigator Map | C++, GTK, OpenGL, Git, Multi-Threading

- Developed a GIS-based map with interactive zoom and autocomplete searches, achieving **<15ms** pathfinding, **panning under 100ms**, and map load times of **<1s** for smooth user interaction.
- Optimized delivery routes for up to **50 locations** using **A***, **multiDijkstra**, **greedy heuristics**, **2-opt**, and **simulated annealing**, parallelizing computations across **4 threads** to reduce runtime by **4x** and cut total path length by **15%**.
- Designed an intuitive, **WCAG-compliant UI** tested by **20+** users, and a location sharing feature via **email API**, boosting user confidence for **75% of survey respondents**, achieving a **System Usability Score of 91**.

LEADERSHIP EXPERIENCE

Engineering Success Mentor (UofT): Guided **30+** students on academics and career planning, improving performance.

Campus Strategy Member (UofT AI): Organized **5+** AI events, engaging **50+** students and raising campus participation.

Taekwondo Instructor (Master Ryu Taekwondo): Taught **25** students aged 7–14, building discipline and confidence.