Justin Daludado

(647) 330-2358 | justindaludado@gmail.com | github.com/justindal | justindaludado.com

Education

Honours Bachelor of Computer Science   September 2021–April 2026
Carleton University | *Ottawa, Ontario*
Relevant Coursework: Algorithms, Databases, Data Structures, Object-Oriented Programming, Web Development, Machine Learning, Software Engineering, Networking, Software Quality Assurance.

Relevant Skills and Experiences

Languages: Java, Python, C/C++, JavaScript/TypeScript, HTML, CSS, Go, Haskell, SQL, Swift
Tools: Node.js, React, PostgreSQL, MongoDB, REST API, Qt, Oracle Cloud, AWS, Gymnasium

Work Experience

Computer Science Instructor | LogicFusion Limited, *Thornhill, Ontario*   June 2025–August 2025
- Taught 40+ students aged 6–14 fundamental computer science concepts through interactive lessons.
- Led hands-on coding projects using languages such as Python, JavaScript, and Java.
- Designed lesson plans with visual aids and real-world examples, improving post-class quiz scores by 20%.

Team Member | Baskin Robbins, *North York, Ontario*   April 2022–August 2023
- Provided customer service by taking orders and preparing products in a fast-paced environment.
- Facilitated conflict resolution among team members through effective communication, leading to a more positive and collaborative work environment.

Applied Projects

Gymnazo | *Swift, MLX, Box2D*   October 2025
- Developed a reinforcement learning library in Swift for Apple Silicon with 13 reference environments and utilities including various observation/action spaces and environment wrappers.
- Implemented DQN, SAC, Q-Learning, and SARSA algorithms with replay buffer persistence, and training callbacks including checkpointing, evaluation, and early stops.
- Integrated the C physics engine, Box2D, for rigid-body simulation and efficient collision detection, improving training speed by 11%.

NextMove | *SwiftUI, Firebase, Google Maps API, Google Places*   June 2025
- Developed a comprehensive iOS travel discovery app with location-based activity recommendations, intelligent filtering, and itinerary planning using SwiftUI and SwiftData for offline use.
- Implemented a spatial pagination system with ring exploration, reducing API calls by 20% while maintaining diverse place discovery across multiple geographic areas.
- Integrated Firebase to support cloud sync for user data, and served authentication to 200+ active users.

QNX Quantum-Proof Boot Validation | *QNX Neutrino, C, TPM, PQC*   February 2025
- Developed quantum-proof cryptographic validation for QNX kernel images, improving boot-time security against quantum attacks.
- Built performance profiling tools to measure validation latency and memory usage, reducing validation latency by 28% and memory usage by 18%.

Self-Parking Car RL Agent | *Python, Gymnasium, Stable Baselines 3*   December 2024
- Designed an autonomous parking system using PPO in SB3 with automated experiment tracking.
- Applied mixed-precision training and custom reward shaping, reducing convergence time by 15%.

dont-secure.me | *React, Next.js, Swift, SwiftUI, MongoDB, REST API*   April 2024
- Built a full-stack social media platform with both web and native iOS apps for cross-platform connectivity.
- Engineered a scalable database using MongoDB for user management, supporting 1000 concurrent users.
- Designed a REST API with authentication and rate limiting to enable secure data transactions.