

Justin Daludado

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EDUCATION

Honours Bachelor of Computer Science

September 2021-Present

Carleton University, Ottawa, Ontario

- Courses in Algorithms, Databases, Data Structures, Object Oriented Programming, Web Development

RELEVANT SKILLS AND EXPERIENCES

Languages: Java, Python, C and C++, Javascript/Typescript, HTML, CSS, Go, Haskell, SQL, Swift

Tools: Node.js, Next.js, React, PostgreSQL, MongoDB, RESTful API, Qt, Oracle Cloud, Gymnasium, Git

WORK EXPERIENCE

Team Member

April 2022-August 2023

Baskin Robbins, North York, Ontario

- 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

Quantum-Proof Secure Boot Validation on QNX

February 2025

- Developed robust cryptographic validation for embedded QNX kernel images using NIST-approved Dilithium post-quantum cryptography signatures, ensuring boot-time security against quantum computing threats.
- Implemented secure key management with proper generation and usage of cryptographic keys.
- Integrated wolfSSL library for efficient hash computation and quantum-resistant digital signatures
- Created performance measurement functions to evaluate validation metrics, enabling optimization for resource-constrained embedded systems.

Self-Parking Car Reinforcement Learning Project

December 2024 - Present

- Engineered a complete an autonomous parking system using Stable Baselines 3, implementing the PPO reinforcement learning models with automated experiment tracking.
- Designed and implemented a custom Gymnasium environment featuring multi-modal observations and continuous action spaces for realistic mechanics.
- Implemented simulation visualization using PyGame for real-time monitoring of the environment.
- Optimized model performance through PyTorch-based neural networks with mixed precision training, achieving significant improvements in training speed.

Full-Stack Schedule Management System

October 2024

- Engineered a responsive web application using Next.js 15, TypeScript, and React to manage employee schedules and availability across multiple store locations.
- Implemented real-time data synchronization using Supabase for authentication, role-based access control, and database operations using PostgreSQL.
- Built a hierarchical user system supporting different roles (managers/employees) with distinct permissions.

don't-secure.me

April 2024

- Developed a full-stack password-less social media platform with web and iOS applications, leveraging Next.js, React.js, and SwiftUI for cross-platform functionality.
- Designed a scalable database architecture using MongoDB for user information management, with optimized queries for mobile and web performance.
- Implemented a RESTful API enabling secure data transactions and seamless cross-platform integration.
- Created a native iOS companion app using SwiftUI, featuring real-time data synchronization and native device capabilities.