Mikkael Dumancas

469-463-9609 | mxd220018@utdallas.edu | linkedin.com/in/mikkael-dumancas-48189b290

Objective

Computer science undergraduate seeking a role in software engineering, networking, or machine learning to apply hands-on experience and a strong academic foundation in building practical, impactful systems.

Education

University of Texas at Dallas Richardson, TX
Bachelor of Science in Computer Science *Aug. 2022 – Dec. 2025*
Relevant Coursework *Machine Learning, Networking Laboratory, Computer Networks, Data Structures & Algorithms, Database Systems, Statistics, Operating Systems*

Experience

Front House/Customer Sales member April 2023 – September 2023
Cityline Tasty Treats *Richardson, TX*

- Managed multiple **food stations** associated with **various franchises** and multi-tasked to satisfy customers efficiently
- Implemented **priority task lists** into the workplace to fairly delegate all necessary duties to clock out employees **within 30 minutes** past closing time
- Promoted the business through **social media**, sampling, face-to-face marketing, and **over-the-phone**

Projects

Google Dino Run RL Agent | *Python, Gymnasium, PyTorch* March 2025 – May 2025

- Created a **custom Gymnasium environment** with real-time screen capture and scripted inputs, letting a Stable-Baselines3 **DQN agent** autonomously learn Google's offline Dino game
- Refactored the capture and input pipeline to boost training **throughput** from 3 FPS to 10 FPS (**3x** increase), cutting each **50 k-episode run** from 90 minutes to around 45 minutes (**50% decrease** in training time)
- Designed a **multi-tier reward** scheme (dense survival, sparse obstacle-clear, action cost, crash penalty) that accelerated convergence within the **50 k-episode cap** and produced consistent obstacle clearance
- Utilized systematic hyper-parameter tuning over a **300 k-step replay buffer** to boost agent's test high score from 47 to 435 (**9x** increase) and training high from 87 to 302
- Automated checkpointing and TensorBoard analytics through custom **Stable-Baselines3 callbacks**, ensuring reproducibility and **real-time performance tracking** on **CPU-only** hardware

Full Stack Retail Website | *HTML, CSS, JavaScript, Flask, MS SQL* September 2024 - November 2024

- Led a team of **9 members** and coordinated a **13-week** plan—models, data loads, front-end build, and presentation—delivering a fully functional prototype on schedule
- Designed an EER and 15-table relational model, then validated every table to **100% 3NF** for efficient storage and query performance
- Built a **responsive** interface that consumes the API, showcasing fault-tolerant CRUD cycles in an **8-product live demo**
- Boosted discoverability with an **indexed keyword-search** service that returns exact SKU matches and supports flexible brand/category filters
- Developed a Python Flask **REST back-end** on MS SQL, providing secure, low-latency endpoints for product/user transactions and cart-analytics logic

Technical Skills

Languages: Java, Python, C++, C, JavaScript
AI/ML: PyTorch, Stable-Baselines3, NumPy, MatPlotLib, OpenCV, Gymnasium
Web Development: SQL, HTML, CSS, React, Flutter, Flask

Extracurriculars

UTD Axxess Hackathon | *Participant* February 2024
UTD Hackathon X | *Participant* November 2023
Greater Dallas Youth Orchestra | *Violinist* August 2021 - May 2022
Jiu Long Troupe | *Ambassador, Performer* April 2021 - May 2022