FRANK TIAN

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AI/ML-focused Computer Science graduate student with full-stack development experience

EDUCATION

University of Southern California — Los Angeles , CA
Master's of Science — August 2024-May 2026
Computer Science with a specialization in Artificial Intelligence, 3.85 GPA
Relevant Coursework: Foundations of Artificial Intelligence, Applied Natural Language Processing, Deep Learning

University of Toronto — Toronto, ON
Honors Bachelor of Science — January 2018-June 2023
Major in Computer Science and Economics, 3.45 GPA

WORK EXPERIENCE

Thomson Reuters — Toronto, ON
Software Developer Intern — September 2021-September 2022

- Implemented new features into an enterprise user administration platform with over 100,000 users used by 96% of the fortune 1000 companies in a Full-Stack role using C# and JavaScript in the backend and HTML and CSS in the frontend to allow for easier allocation of permissions when creating new users and a more streamlined process of reallocating permissions to existing users.
- Formulated SQL queries for interested parties to fetch requested user administration data to be deployed in crucial platform processes. Wrote scripts to condense obsolete and excess data by 90%+ to maintain data cleanliness and uphold efficiency of the platform.

TECHNICAL SKILLS

Programming Languages: Java, Python, HTML5, JavaScript, CSS, SQL, C#, C++
Hard Skills: Algorithms, Data Structures, Version Control, Agile, Pytorch
Soft Skills: Communication, Teamwork, Critical thinking, Problem solving

ACHIEVEMENTS

SmartPark: UofTHacks VI - Top 10 Prize and "Best use of IoT and or AI to help foster sustainable cities" by Telus

- Built a smart car application with React and Node.js utilizing the location data provided by the vehicle to automatically pay for any parking fees and tickets

Practix: IncubateXDC Hackathon - First Place

- Created a platform using JavaScript, HTML, and CSS allowing users to practice presentation skills and receive critique over video call

PROJECTS

Get Down Mr. President!

- A game created in collaboration with a team of artists, musicians, and other developers using Unity and presented to thousands of attendees at the Level Up Showcase in Toronto.
- Scripted character movement physics to allow the player to intuitively control a large group of characters and implemented obstacles to enable smooth game progression and predictably unpredictable interactions.

A Short Quest

- Solo-developed an adventure game with multiple endings and using a fine-tuned Distilbert model and an embedded LLM model in an experimental system to allow players a more immersive experience when conversing with the game characters without relying on generated content and still maintaining full control of characters and information.
- Also includes short platforming, roguelike, and bullet hell sections to enhance the gaming experience.

Q-learning based Go player

- Trained a model to play the classic board game Go using Q-learning and alpha-beta pruning.
- Trained on a dataset of over 15 million games against itself and other Go playing models.

Text-to-Game Engine

- Built an engine that runs a text-based game complete with features like knowledge consistency and goal-checking not present in current market leaders using LLM prompting and Retrieval Augmented Generation (RAG).
- Uses multiple layers of classifiers and generation to simulate an environment reminiscent of classic text-based adventure games with customizable settings and characters.