# Aryan Gidwani

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## EDUCATION

**University of Toronto**  Toronto, ON
*Bachelor of Applied Science in Computer Engineering (GPA: 3.2)*  *Sep. 2023 – Apr 2027*

## EXPERIENCE

**Insurance Data Analyst Intern**  May 2025 – Aug 2025
*Echelon Insurance*  *Mississauga, ON*
- Performed **data analysis** on 500+ insurance policies weekly, identifying overdue activities and discrepancies to ensure 100% record accuracy and compliance
- Investigated and processed 30+ claims per week involving unlisted drivers, detecting trends and anomalies, and escalating 10–15% of complex cases to underwriters for timely resolution
- Prepared and delivered weekly **data-driven presentations** to a team of 10+, summarizing policy updates, trends, and recommendations to streamline workflows and support informed decision-making

**Math Tutor**  Aug 2019 - Mar 2020
*Kumon Learning Center*  *Mississauga, ON*
- Provided individualized math instruction to 10+ students weekly, tracking performance and identifying learning gaps to improve overall comprehension and scores by 20%
- Designed data-driven lesson plans for 10+ students, optimizing problem-solving and critical thinking skills
- Delivered weekly progress reports with metrics and insights to students and parents, providing targeted guidance

## PROJECTS

**Interactive City Mapping Application** | *C++, GTK Library, VS Code, Git*  Jan 2025 – Apr 2025
- Designed and developed an interactive mapping application for **visualizing and navigating maps of 20+ cities**, enabling dynamic features such as live traffic updates, weather overlays, subway and cycling paths, and automatic intersection identification from user-inputted street names (**https://youtu.be/jRscCVP-Bp0**)
- Implemented efficient pathfinding algorithms in C++, including **Dijkstra's and 2-opt**, leveraging multi-threading to compute optimal routes between locations with an average latency of 2 seconds
- **Integrated APIs** and utilized data structures such as **maps, vectors, and sets** to implement core features, including live traffic updates via TomTom Traffic API and weather overlays via OpenWeather API, ensuring fast and accurate map interactions

**Audio-Based Flappy Bird** | *C, Altera DE1-SOC, VGA Adapter*  Mar 2025 – Apr 2025
- Developed an audio-controlled Flappy Bird game with real-time character movement using microphone input, supporting responsive gameplay with sub-20ms input-to-display latency
- Rendered dynamic game graphics on the **Altera DE1-SOC board using VGA adapter**, including sprites, platforms, and backgrounds, managing up to 20 on-screen objects simultaneously
- Implemented **double buffering** with front and back buffers, ensuring smooth gameplay at least 60 FPS and **eliminating screen tearing and flicker**

**Pacemaker Data Analyzer** | *Python, VS Code*  Feb 2024 – Feb 2024
- Developed a pacemaker data analysis application, placing in the **top 10 at the Hack the Heart Hackathon**; capable of detecting heart irregularities and low battery levels within large ECG datasets
- Filtered and analyzed heartbeat data by demographic, supporting multiple patient profiles and displaying heart graphs with condition indicators and pacemaker battery status
- Designed an interactive UI with multiple color themes, enabling smooth visualization of 10,000+ ECG readings with minimal latency

**Basketball Video Game** | *Verilog, Quartus Prime*  Oct 2024 – Nov 2024
- Designed and developed an interactive basketball video game for the Altera DE1-SOC board, featuring real-time scoring, responsive VGA graphics, and user-controlled gameplay
- Implemented game logic with **50+ finite states**, flip-flops, registers, slow counters, and seven-segment displays, enabling smooth game progression with less than 20 ms input-to-display latency