Gabriel Smith

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SUMMARY

I am a computer science student at the University of Toronto with a strong foundation in programming, specifically data structures, algorithms, and artificial intelligence. I am passionate about technology and innovation, eager to learn new skills, and ready to apply them to real-world challenges. Currently, as a Customer Service Representative at Farm Boy, I excel in providing customer service, preparing ready-to-eat meals, and maintaining a clean and safe work environment.

EDUCATION

Bachelor's degree in Computer Science and Statistics

University of Toronto Mississauga • Mississauga, Ontario • 09/2022 - 04/2027

EXPERIENCE

Systems Developer & Tester

Ministry of Public and Business Service Delivery and Procurement **February 2025 - Present, Toronto, Ontario, Canada**

- Automated regression testing processes for government procurement systems, contributing to more efficient software deployment cycles.
- Implemented Web API integrations using Postman and Swagger over 12 months to enable real-time data exchange across three government platforms.
- Supported and executed the migration from SFTP to REST services, delivering development and testing contributions to enhance TestApp's functionality.

Customer Service Representative

Farm Boy Inc. **07/2024 - Present, Ontario, Canada**

- Provide exceptional customer service, addressing customer inquiries and resolving issues promptly and courteously.
- Maintain a clean and organized work area, following health and safety regulations.
- Assist with inventory management, including stocking supplies and monitoring product freshness.
- Collaborate with team members to ensure efficient workflow and a positive shopping experience for customers.
- Offered assistant manager and supervisor titles within a few weeks of employment due to my work ethic and delegation skills.

Assembler

Dana Incorporated **08/2021 - 09/2021, Oakville, Ontario, Canada**

- Assembled mechanical and electronic components for automotive products, meeting daily production targets efficiently and achieving minimal production errors.
- Maintained high quality standards for products by conducting quality checks regularly, achieving a high accuracy rate with zero-defects. defects

PROJECTS

Stroku

Independent Project • stroku.netlify.app/ • August 2025 - Present

- Engineered a cross-platform streaming solution connecting Android devices with Roku TVs, enabling seamless transmission and playback of HDR 4K video URLs and bypassing traditional Miracast limitations.
- Integrated advanced content delivery protocols within Stroku to optimize streaming performance, ensuring low-latency HDR 4K playback between disparate platforms and enhancing user accessibility beyond conventional standards.

Battleship Solitaire AI

University of Toronto • github.com/gabrielsmith1874/My-Projects/tree/main/Battleship%20Solitaire • November 2024 -November 2024

- Implemented Battleship Solitaire AI by framing it as a constraint satisfaction problem using Python to maximize solution efficiency.
- Executed forward checking and domain pruning using AC-3 algorithm, enhancing AI problem-solving capabilities.
- Engineered solutions using enhanced backtracking search and forward checking with MRV heuristic.

Checkers AI

University of Toronto • github.com/gabrielsmith1874/My-Projects/tree/main/Checkers%20AI • October 2024 - October 2024

- Engineered an advanced Checkers AI, implementing a Minimax algorithm with alpha-beta pruning.
- Designed a user-friendly interface for the checkers game employing PyGame library and object-oriented programming techniques.

Text Adventure Game

University of Toronto • github.com/gabrielsmith1874/My-Projects/tree/main/Adventure%20Game • November 2023 - December 2023

- Developed a text-based adventure game utilizing natural language processing to enhance user accessibility and engagement.
- Integrated advanced Google Cloud APIs, enabling seamless voice recognition and multilingual support through natural language processing and MaryTTS, broadening accessibility to visually impaired and non-English speaking players.
- Developed dynamic game mechanics utilizing object-oriented principles and incrementally modified framework to enhance gameplay experience.
- Facilitated regular team sprints and meetings within Agile framework evolving a game prototype.

Huffman Compression / Decompression

University of Toronto • github.com/gabrielsmith1874/My-Projects/tree/main/huffman • June 2023 - May 2023

- Implemented efficient Huffman compression and decompression algorithms in Python, optimizing for both speed and memory usage across diverse datasets.
- Achieved over 80% compression rate by designing and implementing Huffman encoding.
- Developed robust decompression algorithms maintaining 100% accuracy, ensuring no data loss post-decompression.

COURSEWORK

Programming on the Web
University of Toronto • 2026 • Javascript, HTML, CSS
- Managed frontend with HTML and backend with Javascript as well as styling with CSS.

Probability and Statistics
University of Toronto • 2026 • R, Hypothesis Testing, Power, Distributions
- Worked with a team in analysing self-esteem and happiness data for an introductory psychology course. Designed an R markdown incorporating Histograms, Line Graphs, etc for displaying and comparing data between courseload and happiness or self-esteem. Performed hypothesis testing applying the central limit theorem to form conclusions about a population from a sample.

Introduction to Machine Learning
University of Toronto • 2025 • Python
- Supervised Learning like k-th nearest neighbours model for image detection. Using decision trees for regression and classification.

Introduction to Artificial Intelligence
University of Toronto • 2025 • Python
- Learned a variety of AI search techniques including A*, DFS, BFS, backtracking search incorporating forward checking and AC-3, Minimax and more.

Introduction to Databases
University of Toronto • 2025 • SQL
- Writing queries and integrity constraints on a database for a travel company.

Software Tools and Systems Programming
University of Toronto • 2024 • C
- Developed software and text-based games using C Created a shell framework with support for piping, redirection, execution etc. Created a server to run a multiplayer text turn-based game using select().

Data Structures and Analysis
University of Toronto • 2024 • Python
- Developed data structures to solve real world tasks under certain complexity constraints. Proved correctness and time complexity of algorithms.

Software Design
University of Toronto • 2023 • Javascript
- Worked on a large project in a small group Learned about UML diagrams, scrums, waterfall and general collaboration skills. Focused on adding accessibility features to games.

Computer Organization
University of Toronto • 2023 • Assembly
- Learned how code is assembled by an assembler Coded Sokoban using assembly and basic I/O like a light board and D-PAD. Read and operated on binary, octal, and hexary.

SKILLS

Algorithm Design, C, C#, Java, Object Oriented Programming, Python, Assembly, Time/Correctness Analysis, Artificial Intelligence, Machine Learning, SQL, Javascript, HTML, CSS