

Vincent Terpstra

E-Mail: vdterpst@gmail.com

Phone: (519) 440-8980

Address: Toronto ON.

Website: <https://vincent-terpstra.github.io/>

LinkedIn: <https://www.linkedin.com/in/vincent-douglas-terpstra/>

Programmer Profile

I am a programmer, an innovator, an entrepreneur. I have **3 years experience** developing Android applications with **Java**. I excel at creativity; designing and building functional applications. I recently graduated with a **Computer Programming Diploma** from **ICT Seneca**, learning fundamentals in full stack development, database management and object-oriented programming. I've never had a programming problem I couldn't Google, or brute-force with a satisfying solution. I am always learning and applying my knowledge to challenge myself to implement new and unique ideas.

Project Portfolio: <https://github.com/vincent-terpstra>

Pool Game – Java & LibGDX & OpenGL – Independent 2019

Implemented the UI, physics engine, and renderer for an Android application. Designed an OpenGL shader to render 3D pool balls from a square, linear algebra and a Phong algorithm.

Sudoku Solver – C & CUDA – Class group project 2019

Collaborated with a team of students to profile a 25x25 Sudoku solver. Rebuilt as a kernel for a Nvidia GPU. Reduced the run-time of the algorithm from 16 minutes to 750 microseconds!

<https://wiki.cdote.senecacollege.ca/wiki/TriForce>

Connect Four AI – Java & JavaFX– Class Assignment 2018

Originating as a class assignment, this became the basis for a self-taught lesson in AI, backtracking algorithms, path reduction, and heuristics.

A* Path-finding Algorithm – Java & LibGDX – Independent 2018

An experiment with algorithms; implemented a hexagonal grid and randomly generated 'infinite' map organized in Quad tree sections. Applied A* path-finding algorithm using a distance heuristic. Added direction to reduce neighbour nodes and decrease compute time.

Education - Computer Programming Diploma

Seneca's School of Information & Communications Technology 2018 - 19

- On Fall 2018 **President's Honour List** for academic achievement.
- 4.0 GPA
- Tutored several students for the C++ final.

Classes & Skills

- Web Development - Javascript, html, css; Built a website with node.js, Express framework, and Handlebars templating. Implemented multiple mock back-ends using MongoDB and PostgreSQL.
- C++ - standard function library, containers, lambdas, pointers
- Java - simple apps with javaFX; sockets, streams, multi-threading
- Database Management – using IBM's iSeries & SQL, normalizing data, joins, CRUD; rpgle, ccle
- Systems Analyst - Writing business use cases and system diagram documents
- GPU - professional option - Application profiling, writing kernels using Nvidia CUDA toolkit for many-core devices. Introduction to OpenCL.

Personal Interests

Indie Game Dev – Board games – Distance running – Reading – Creative writing.