Vincent Terpstra
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Programmer Profile

I am a self-motivated programmer with a passion for problem solving, and writing efficient readable modular solutions. As an independent developer my SDLC was focused on creating the minimum viable product, with an agile approach to adding new features. I am constantly challenging myself, programming innovative solutions and applying the code to real-world scenarios.

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 for 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, clle
- 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. Intro to OpenCL.

Project Portfolio: vincent-terpstra.github.io
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 Nvidea GPU. Reduced the run-time of the algorithm from 16 minutes to 750 microseconds!
https://wiki.cdot.senecacollege.ca/wiki/TriForce

Connect Four AI – Java & JavaFX– Class Assignment 2018

This began as a class assignment, and then became the basis for a self-taught lesson in AI, back-tracking 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.

Personal Interests

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