Trevor Byko

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Education

Portland Community College — Portland, OR
Associates Transfer Degree — 2015–2017

Oregon State University — Corvallis, OR
B.S. in Computer Science — 2018–2021

- Capstone Project: "App to Control the Water Level at the Hinsdale Research Lab"

Skills

- **Graphics:** OpenGL, Unity, Blender
- **Web Development:** JavaScript, NodeJS, AngularJS
- **Tools:** Git / GitHub, Visual Studio / Visual Studio Code, Vim
- **Familiar Libraries:** POSIX thread API, OpenMP, OpenCL, CUDA Math

Languages

- **C / C++:** Proficient
- **Python:** Experienced
- **HTML / CSS:** Proficient
- **OpenGL / OpenCL:** Beginner
- **Java:** Experienced
- **Assembly:** Beginner

Coursework

Data Structures
Algorithms
Artificial Intelligence
Machine Learning
Computer Architecture
Computer Networking
Parallel Programming
Mobile Application Development

Projects

- **Text Based "Adventure" Game:** A text based role playing game with enemies and loot. The object of the game is to find your way out of the maze, with the highest score possible (combo of lowest number of rooms traversed and treasure / items found), without dying from the monsters and skeletons within. Originally coded in C89, but later upgraded to C11.
- **Predicting Income Level Using k-Nearest Neighbor:** Developed in Python3, the program takes input in the form of an n-dimensional matrix of values representing attributes like capital-gain/loss, gender, hours worked per week, occupation. Continuous values are mapped over a Gaussian curve generating values between 0 and 1, and categorical variables are encoded in binary sequences, where each additional category is a dimension of the matrix, filled either with 0 or 1. The program using the training set of data to perform 4 fold cross validation and searches for an optimal value of k to improve accuracy. Given a data-set that is approximately even in distributed, it achieves an accuracy of .89. The program can scale due to efficient use of NumPy functions.
- **Arcade Helicopter Target Shooter:** Using mouse and keyboard, control a wire-frame model helicopter through a 3D space to hit targets and gain points. Coded in C using OpenGL.